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# ASTHENOPIA AND OCULAR HEADACHE.

BY

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The term Asthenopia is applied to eyesight which is easily fatigued, the essential symptom being discomfort in the eyeball, as the result of continuous or even of very moderate eyework. It is most commonly caused by looking at near objects, especially under faulty artificial illumination; but it is very frequently brought on by gazing continuously at a distance, as in watching a cricket match, or at a theatre or picture-gallery. The strain or fatigue often expresses itself outside the eyeball as neuralgia (retro-ocular, supra-orbital, temporal, etc.), and it may cause headache to which the term Ocular Headache has been applied. The headache which is associated with eyestrain is usually located across the forehead, close over the eyebrows. It is frequently one-sided where astigmatism exists in the adjoining eye, and I have then often noticed that it is referred to the anterior portion of the temporal ridge. The pain may be occipital, especially where amblyopia co-exists or there is intra-ocular congestion, but in my experience it is but rarely vertical.

A consideration of this subject is of interest to every practitioner, no less than to the oculist. Any facts which can throw light upon the causation of complaints so common as neuralgia and headache, or which may suggest any plans of treatment

likely to help our patients who are suffering from these depressing and obstinate maladies will be a general gain to medical knowledge. On the other hand, it cannot be too widely understood what serious discomforts are being caused by the overpressure of eyes and brain, which seems to be a necessary factor in the education of the present day.

For the purposes of this paper, we may divide ocular neuralgia and headache into two classes:

(1) In which the symptom depends mainly upon some nervous peculiarity of the patient.

(2) In which the cause lies in the eyeball or in its muscular apparatus.

Class I.—It will very rarely occur that the eye and its appendages are absolutely normal, yet a neurasthenic condition of system may be the essential factor in the case, and judicious constitutional treatment the sole means of cure.

In irritable, hysterical, or hypochondriacal patients, especially in those whose eyes are unduly worked—for instance, pupil-teachers, who study for long hours in addition to their duties, bootmakers, seamstresses, and clerks,—symptoms of heaviness and irritability of the eyes, dazzlings under moderate illumination, and failure of sight, are often complained of.

Some of these cases depend on extreme hyperæsthesia of the retina, or of the ophthalmic division of the fifth nerve, the result possibly of former inflammation in the cornea, of which no record may be seen; some, on weakness of the ciliary muscle.

Where there is unstable equilibrium or undue irritability or tendency to exhaustion of the central nervous system, or of the ocular or orbital nerves, symptoms of asthenopia, fatigue, temporary amblyopia, and contraction of the fields may be readily induced; and these symptoms are specially liable to occur under reflex excitation from the nasal and dental branches of the fifth nerve. They have been attributed as reflex phenomena to abnormal conditions of the uterus and ovaries, and even of the intestines.

Conversely in migraine the symptoms are expressed through the fifth and other sensory nerve fibres of the meninges, and

through the vagi and sympathetic; but these may be the efferent nerve channels in reflex action, of which the primary afferent impulse starts from irritation of nerve filaments in the eyeball.

In patients liable to headache—the tendency to headache existing even under favourable conditions—it may be induced or exaggerated by eyestrain, a proper correction of which may establish the balance in favour of comfort. Dr. G. M. Gould[1] states that of fifteen hundred cases of headache upwards of seventy-five per cent., and of sick headaches ninety-five per cent., were due to eyestrain. This proportion is largely in excess of my own experience, but no one any longer doubts the extreme importance of careful testing and examination of the eyes in headache.

There is, in my opinion, a typical form of asthenopia, of which I have not seen any account, found in young women who do not show any symptoms of hysteria. The eyes easily tire, and tend to flush and feel hot; there is no impairment of the field of vision, and the refractive error varies, but in many cases is scarcely appreciable, whilst its correction makes but little difference to the symptoms. The essential element is a tendency to active hyperæmia of the face and neck, increased by hot rooms, excitement or study, with, on the other hand, coldness of the hands and feet; in these patients, inquiry must be directed to a better balance of the circulation, and its vaso-motor nerve control, as well as to the condition of the generative and digestive organs.

I think that severe asthenopia is more common in young boys than in girls of the same age, partly perhaps because their studies are more rigorously enforced.

The following case, which has been under my occasional observation for seven years, shows the trouble that may be caused by the idiosyncracy of the patient after slight inflammation:

Basil R., seven years old, came on January 4th, 1886, with slight internal squint of the left eye. This eye was very amblyopic, 20 J.; the sight in it was not sufficient to avoid obstacles in progression. Hypermetropic not more than 1 D.

[1] *Oph. Rev.*, vol. x., p. 280.

The right eye was emmetropic and had perfect sight. After a few months' practice with the left eye, its vision improved to 6/12 1 J.; and later it reached 6/9, where it has remained ever since. He has always seen better without any glasses, even for reading. He was unable to study severely, but went on well, the squint gradually disappearing, until, in May, 1890, he had a slight attack of ophthalmia, which was soon cured; there was no evidence of implication of the cornea, and no follicular swelling remained. From this time, however, any attempt to use his eyes produced lachrymation and headache. His studies were curtailed, but he could not manage them on account of asthenopia. There was no further impairment of the sight, nor could any form of help by spectacles afford relief; he became very excitable, and walked in his sleep. After a short rest in the country he returned apparently well, but broke down again on resuming moderate work. After a full term's rest, he was able to do his lessons in school, his preparation in the evening being done for him. In the beginning of 1892 he completely broke down again—photophobia, lachrymation, and headache,—although his central and peripheral vision remained perfect. Every chance had been given him by his college masters, but I felt obliged to recommend that he should abandon public school life, and be content with a tutor at the seaside. He appeared for two years to have completely recovered, but has recently had a recurrence of his asthenopia independent of any apparent cause.

There is need of a good school where individual attention could be given to boys with asthenopia, progressive myopia, slight zonular cataract, etc., who should not be allowed to attempt the full curriculum of public school studies. For such scholars he aspect and dimensions of the school windows and the method of artificial illumination should be perfect, the seats and desks should be carefully applied, and the amount of reading limited.

Many children come to the hospital complaining of eye-ache and defective vision (5/18 or 5/24), who completely recover with no other treatment than a few weeks' rest; these are cases of ciliary or retinal fatigue, induced by an amount of school work which the children, from some crisis in development or health, are temporarily unable to master. Other types of asthenopia which depend upon some defective conditions in the general health of the patient might be alluded to.

Class II.—The very large majority of the cases of asthenopia depend on faulty conditions in the mechanism of the eye itself,

and should be included in a class which comprises errors of refraction and abnormalities of the intrinsic and extrinsic ocular muscles, under the divisions Accommodative and Muscular Asthenopia.

(A) *Accommodative Asthenopia* is the form which is associated particularly with abnormal conditions of the ciliary muscle and with errors of refraction. This division of the subject is very well understood; so much so, that even some medical men seem to consider that an optician's advice as to spectacles is quite sufficient, and fully capable of assisting to cure their patients. Thus encouragement is being constantly given to a form of counter-prescribing which is not creditable to the doctor, nor beneficial to the patient, nor advantageous to the optician, who would still sell his spectacles, if the doctor himself had prescribed them. Those of us who have the greatest experience in dealing with astigmatism or muscular deficiencies know best how difficult it often is to decide what lenses are the most suitable. In an uncomplicated presbyopia there is perhaps no need for a scientific opinion in the selection of glasses. But the reason why a child's sight is deficient or painful, or that of an adult differs from the normal standard in degree or competence, is a problem for solution by medical knowledge.

Donders wrote of asthenopia as a "peculiar morbid condition of the eyes which has long attracted the attention of ophthalmologists. The phenomena of which it is composed are highly characteristic. The eye has a perfectly normal appearence; its movements are undisturbed, the convergence of the visual lines presents no difficulty, the power of vision is usually acute, and nevertheless in reading, writing, and other close work, especially by artificial light, or in a gloomy place, the objects after a short time become indistinct and confused, and a feeling of fatigue and tension come on in, and especially above, the eyes, necessitating a suspension of work."

The emmetropic eye sees at a distance in a state of rest, and its full complement of accommodation is available for closer vision; the hypermetrope, on the other hand, is obliged to tax his accommodation under all conditions where clear vision is required; his focussing muscle is therefore scarcely ever at rest,

and when he requires to see more closely only a portion of its normal energy is available. The undue strain may be overcome during youth and health; but as the power of accommodation lessens with age, and particularly under conditions of excessive eyework or of illness or faulty illumination, neuralgia and headache are produced, and the sight fails. It is more than thirty years ago that Donders completely solved the problem of "accommodative asthenopia" and "ciliary strain."[1] His statement that hypermetropia is usually at the bottom of asthenopia remains unchallenged, if we include hypermetropic astigmatism. Still asthenopia may depend upon any condition of refractive error; and this cause is almost universal, for it is only a very small number of eyes that are perfectly emmetropic.

I think that a very large percentage of cases of astigmatism is associated with neuralgia and headache, and that very small degrees of error in curvature of the cornea often give rise to more discomfort than is found in cases where the astigmatic error is more marked. If this be so, it is of prime importance that astigmatic defects should be accurately neutralised, and this can only be done by careful objective testing, as by retinoscopy and the ophthalmometer. No doubt a considerable number of asthenopic patients are wearing with relief spectacles that do not properly neutralise the defect from which they are suffering; on the contrary, there are many others who receive no benefit from partial or inaccurate correction, and in all cases it is necessary to adopt a more scientific method than the subjective one by which the optician aids the patient to select lenses for himself.

Conditions of the ciliary muscle require consideration: presbyopia is the simplest form; fatigue or paralysis of accommodation may occur, notably after diphtheria, in eyes that are otherwise healthy. Insufficiency of the ciliary muscles has been described as a congenital defect;[2] and it may accompany ill-health, at which time asthenopic neuralgia is not infrequently caused by injudicious reading.

Spasm of accommodation is not very uncommon in overworked

[1] *On the Anomalies of Accommodation and Refraction of the Eye.* New Syd. Soc. 1864. [2] Theobald, *Trans. Am. Oph. Soc.*

children; by its simulation of shortsight, it is a prolific source of deception in the selection of spectacles by subjective testing. The error caused is almost always spherical. Astigmatism from ciliary spasm I believe to be very rare. For the purposes of a paper on "Retinoscopy,"[1] I examined a large number of eyes by the shadow test and by lenses, both before and after the instillation of atropine; in only a very small number was any change produced in the amount of astigmatic error by the use of the atropine, while the presence of a latent spherical defect was of course frequently shown.

Accommodative asthenopia is caused by an intra-ocular condition which must be sought for in each separate eye; very common in hypermetropia, it may also be present in low degrees of myopia and in myopic astigmatism. The discomforts of shortsight, however, usually depend upon the strain due to inaccurate performance of the act of binocular vision, as controlled by the extrinsic muscles of the eyeball, and constitute one of the forms of (B) *Muscular Asthenopia.*

The best recognised example of this binocular defect is insufficiency of convergence, for in myopia the required amount of convergence is always relatively greater than that of accommodation; while hypermetropia, on the contrary, calls for more accommodation than convergence: and as hypermetropia induces both ciliary failure and ciliary spasm, so in myopia we find insufficiency of the internal recti usually, but sometimes a state of internal strabismus due to continuous overstimulation of these muscles. Treatment consists in the correction of the relative amplitudes of accommodation and convergence by the use of concave spectacles, with, in some cases, the addition of prisms.

Besides the excess of convergence in hypermetropia and the excess of divergence in myopia, which may culminate respectively in internal and external strabismus, there are all sorts of other faulty tendencies in the ocular muscles, causing neuralgias and eye-aches, which are grouped under the term muscular asthenopia.

The defects that cause these symptoms may be present in

[1] *Trans. Intern. Med. Cong.*, 1887.

the muscles or their insertions, in the nerves supplying them, or in the central nervous system. The discomfort depends upon the instinctive adherence to binocular vision, and the undue effort necessary under faulty conditions to maintain it. Thus, as Donders pointed out, if while both eyes of some hypermetropes are fixing an object one be shielded by the hand, the covered eye will rapidly deviate inwards; and conversely, by the same method many myopes, who maintain binocular vision, are shown to have a tendency to divergence, which increases with approximation of the object. In squint and diplopia a faulty position of the eyes is sufficiently obvious; and in cases of monocular amblyopia, where the good eye is alone relied upon for sight, the blurred retinal impression from the other is disregarded, the necessity for binocular vision ceases, and the faulty eye wanders according to its muscular balance.

This tendency to deviation may also exist in eyes with good vision, whether emmetropic or aided by spectacles, but here the effort for binocular vision is usually sufficient to maintain the proper direction of the visual axes, even if muscular asthenopia be thereby induced. If a latent faulty tendency in the muscle balance be suspected, it can be made manifest by rendering one eye amblyopic. For this purpose a strong concave or convex lens, with a stenopæic hole to prevent prismatic action, may be used to blur the image of a lighted candle placed at six metres. A ball of light is seen with one eye, the candle flame with the other; and the relative position of the two as projected by the patient indicates the position of the visual axes. Several methods of reaching the same result have been suggested.

For measuring the statical equilibrium of the eyes, the test must always be made with a distant object—five metres at least,—so that the element of accommodation may be eliminated. For measurements at occupation distance, or for reading, where accommodation and active convergence are called into play, Graefe's test, with the dotted line and vertical prism, has been elaborated by Maddox, who also has given us the glass rod test,[1] so useful in all forms of latent deviation. Moreover, diplopia can always be induced by the use of prisms, and by their means

[1] *Oph. Rev.*, vol. ix., p. 129.

the power of abduction or adduction, or other movements of a pair of eyes, can be approximately tested. The vertical deviation is weak and usually limited to overcoming a prism of 1° or 2°, whilst abduction overcomes 7° or 8°, and adduction is much more powerful.

George Stevens[1] has done much by his work and writings to stimulate our inquiries as to "Anomalies of the Ocular Muscles," and has introduced terms which indicate precisely the special tendency or latent deviation in a given case. In *esophoria* and *exophoria* the eye tends respectively to turn in or out, while if the deviation is up or down *hyperphoria* is present.

I am now in the habit of seeking for latent errors in the extrinsic ocular muscles of many of my patients. Such defects are not very common, but in some cases faulty balance undoubtedly exists, and in such, decentring of the lenses (where ametropia is present) or the use of prisms has relieved the muscular asthenopia.

The value of abducting prisms is well recognised, but I have some half-dozen patients with hyperphoria who wear with comfort vertical prisms. In these cases the essential of treatment lies in orthoptic exercises and the stereoscope. Extravagant statements have been made, particularly by American writers, as to the dependence, not only of asthenopia and headache, but of chorea, epilepsy, and of all kinds of functional nervous diseases upon these ocular defects. It is suggested that cures of the nerve disease in some cases can be brought about by rectifying the defects of equilibrium in the eyes by prismatic lenses, by operations on the recti tendons—graduated tenotomies and partial advancements; on the other hand, among the opponents of these enthusiasts (who, to quote Donders's criticism of Bonnet and Pétrequin—1841,—"are too much preoccupied with the idea of tenotomy") are some who question the entity of muscular asthenopia as distinct from errors of refraction, and entirely deny that ocular derangements can be the cause of nervous disease.

A few cases have been published of epilepsy cured after the use of spectacles. One such case has occurred in my own

[1] New York, 1887.

experience, but I scarcely like to claim the cure as more than a coincidence:

G. R., 21, a very energetic man, 6 feet 3 inches in height, suffered from attacks of petit mal, accompanied by headache, diplopia, and peculiar yellow vision, usually occurring about dinner-time. He complained of slight crossed diplopia, which was corrected by a prism 1° base in, while a prism 3° base in gave him homonymous diplopia.

R. 5/12 J 1—1 cyl. $\overset{\text{down and in}}{\underset{30°}{\diagdown}}$ 5/5

L. 5/6—.50 cyl. down and in $\overset{\underset{60°}{\diagup}}{}$ 5/5

He was fond of reading, and felt no discomfort from it, but he could write for only a short time. He was ordered the cylinders mentioned, to be worn constantly, and happens to have had no fit since.

I made no effort to correct his very weak power of adduction and abduction, which might have been due to hyperphoria (of the existence of which I was at that time ignorant). If spectacles were of value in this case, it was by correction only of the astigmatism.

The following case of faulty muscular balance—mainly hyperphoria—well illustrates this defect and the method of its detection:

C. S., a fine, healthy man of 24, has never been able to use binocularly any race or opera glass. To see through them necessitates the closing of one eye; he never uses them.

For two or three years he has at times noticed that the pictures on his bedroom wall are a little doubled when he wakes in the morning. He has not noticed any discomfort from double vision during the day, but has found that he can sometimes voluntarily get a double image. For some months, when tired, he has had slight difficulty in reading; the lines tend to become doubled one above another, and unsteady: this is at once relieved by closing either eye, and his friends have noticed that he has got in the habit of putting his hand involuntarily to his left eye when he is tired in reading.

Vision: R. 6/6 emmetropic

L. 6/8+.50 cyl. 6/6.

Has been given +.50 readers, which are no help. Asthenopia is at times definite, but never severe.

Testing him with a candle at six metres, with a red glass over one eye, no diplopia could be elicited; but single vision was upset by a prism 9° apex in, or 4° apex out, showing marked weakness both of adduction and abduction. Whereas the movements of the right eye upward, and of the left down, were

unusually powerful, single vision being maintained with a prism 5° apex up on the right and 4° down on the left, and a prism of 3° in the same positions gave a feeling of relief to the strain felt when the eyes were unaided; on the other hand, double vision was at once produced by a weak prism 1° apex down over the right, or apex up over the left.

The patient looking at a candle flame at six metres' distance with a strong lens and stenopæic opening over the right eye, the blurred image seen was below and to the right of the candle seen naturally with the left eye.

Maddox's rod placed horizontally over the right eye, gives that eye the impression of a vertical line of light (in orthophoria the light line and candle should overlap). In C.S. the streak wandered about 30 cm. to the right, showing that the eye was turning inwards (esophoria). A 5° prism, apex in, corrected the abnormality. When the glass rod is placed vertically, it gives the impression of a horizontal bar of light; thus placed over the right eye, the bar of light deviated to the base of the candlestick, showing that the eye had wandered upwards; placing the bar over the left eye, the converse obtained—the bar was projected upwards by passive deviation of the eyeball downwards.

The faulty tendency was rather more marked when the right eye was rendered amblyopic than the left; so that while a prism apex down 6° corrected the left, a prism apex up of 8° was required to correct the right.

Although no diplopia could be made manifest without the use of prisms, or by some method by which the vision of one of the eyes was rendered indistinct, the patient at once derived great comfort from placing a 3° or 4° prism apex up over the right eye, and with the same lens read quite comfortably.

The asthenopia has been corrected by spectacles:

R. Prism 2° apex up
L.+.50 cyl.

A prism of 4° was to be used vertically wrong ways, so as to exaggerate the diplopia and thus stimulate the faulty muscles, and the stereoscope was prescribed for orthoptic exercise.

A recent paper by Dr. H. F. Hansell,[1] on "The Prominent Symptoms of Hyperphoria, as illustrated by thirteen successive cases," indicates the importance of enquiring into the conditions of the muscular equilibrium of the eyeballs. In the cases described all causes of discomfort, at any rate all ocular defects, excepting the muscular anomaly named, are said to have been excluded. The symptoms complained of by the patients were asthenopia, lachrymation, photophobia, headache, in some cases

[1] *Med. News*, Feb. 18, 1893.

attended by vomiting, vertigo, dizziness, dyspepsia, nervousness, irritability of temper, mental confusion. These varied types of abnormal conditions are said to have been relieved by curing the hyperphoria, either by tenotomy or by the use of prisms.

## A CASE OF THROMBOSIS OF THE FEMORAL ARTERY LEADING TO GANGRENE.

BY

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THIS patient was a man aged 55, though he looked older.* This was probably due to the fact that for the last few years he had had very bad health, having suffered from frequent attacks of influenza, followed by extreme weakness. Besides this, he has been troubled with a stricture for some years past, and also with a urethro-rectal fistula, for which he was admitted to the Hospital on November 1st, 1892. His condition on admission was one of extreme debility, which he set down to the repeated attacks of influenza rather than to the consequences of the urinary affection. Beyond this, he did not look ill: his temperature was below 100°; his pulse fairly good; his urine was normal in appearance and acid in reaction; the heart-sounds were weak, but not otherwise affected.

From November 1st to Sunday, the 13th, he lay in bed, only getting up to go to the closet. He was fed on light, nourishing diet, and my house surgeon was instructed to pass a bougie occasionally for gradual dilatation of his stricture. On Sunday morning, the 13th, he was looking better than usual when I was in the ward, and told me in passing that he felt stronger. At noon the house surgeon passed a No. 7 French bougie without trouble; at 3.20 the patient had a rigor and a rise of temperature to 102.8°, falling soon to normal. At 11 p.m. he complained of

a sudden and very severe pain in the whole of the left leg below the knee, and when my house surgeon was fetched he found the whole of the leg cold and blanched, and all sensation and motion abolished from the knee downwards. There was no pulsation in either the dorsalis pedis, posterior tibial, or popliteal arteries, and the femoral artery could only be felt to pulsate for about three inches below Poupart's ligament. In this condition he remained without much change up to 38 hours after the onset of the pain and loss of sensation and motion.

He did not then appear to be suffering at all. The lower part, including the foot, was pale, while the upper part of the skin was becoming purple up to a line encircling the knee at the level of the ligamentum patellæ. This purple discolouration extended beyond this line on the inner aspect of the knee in a patch about 3 inches long and 2 broad. The discolouration was sharply marked off against the skin, above which there was a slight flush. There was absolute loss of sensation and motion in all the structures below the knee, while there was great hyperæsthesia above the joint. There was no swelling or œdema anywhere; indeed, there was a slight shrinking of the leg as contrasted with its fellow. The femoral artery pulsated distinctly for about 3 inches below Poupart's ligament, but nowhere else could be felt any arterial pulse, which was in striking contrast to the opposite limb, where the arteries of the foot and thigh were well felt. His temporals were tortuous, as were also the radials to some extent; but none of these were fibrous to the finger, and nowhere could be felt anything clearly pointing to calcareous degeneration in the vessels. The superficial femoral on the affected side certainly felt hard and uneven, but scarcely to the extent of calcareous change. The heart sounds were normal, but feeble.

To what were the changes in the limb due? There can be no doubt that here was a case of thrombosis of the femoral artery in the upper part of its course. The mode of onset, the symptoms subjective and objective, were typical of this. It was a condition in its earliest stages, of which we often read but which fortunately we rarely see. This condition however deserves careful study, especially by operators, who live in dread of its

supervention in cases in which they have tied the femoral artery high up for one reason or another. Here it had occurred spontaneously under our very eyes in a man not old in years, but old in tissue, and it offers an excellent opportunity for study.

Now what was the reason for this sudden blocking of the femoral artery? Was this a case of embolism or of thrombosis? After due consideration, I did not think there was evidence of an embolic blockage, although the suddenness of the attack suggested it. At all events, we could exclude those emboli which are found to start from vegetations on the cardiac valves as the result of acute or chronic endocarditis. There was no abnormality discoverable about the valves of the heart, and the temperature before and after the attack negatived acute endocarditis. Of course a clot may have formed on some atheromatous patch in the aorta, and from this may have been dislodged and swept on into the femoral. But the most reasonable explanation seems to be that a thrombus had formed on the spot in the femoral. What we could feel of the vessel was distinctly hard and knotty, and we know that this particular artery is prone to changes due to chronic arteritis. It is easy then to suppose that some slight inequality on the inner surface, such as the edge of a calcareous plate or an atheromatous ulcer (so called), may have been the starting point of a clot which ultimately blocked the lumen of the vessel. Had the condition which led to the sudden rise of temperature and rigor anything to say to this clotting? I cannot help thinking that it had. The sudden fever to my mind suggested an influx of septic matter to the blood from one source or another. Possibly this was due to disturbance of some septic focus in the urethra by the bougie. It is at all events significant that this rigor took place three hours after the use of the bougie, and the thrombosis started a few hours later. Now we know that in septic conditions clots are frequently formed in the blood stream: for example, in embolic pyæmia and in acute endocarditis. And I suppose that some analogous septic blood change was produced in this case, and that the altered blood only required a roughened surface to provoke it to coagulate, so to speak. It

certainly was not ordinary pyæmia, for the temperature had been quiet both before and after the attack. But a much less profound blood change than that produced in the latter disease might, I apprehend, lead to the formation of thrombi in a very debilitated man with diseased arteries.

The changes produced in the leg, as the result of the arrest of its blood supply, were clear enough. The total anæmia of the nerves resulted in arrest of their powers and consequent loss of both sensation and motion. The sudden onset of pain at the beginning of the attack was possibly due to sudden and general contraction of all the vessels of the limb when their blood supply was cut off, and has its analogue in the pain produced by the application of extreme cold to a part. The pallor is explained in the same way, and also the loss of heat. We also see clearly the commencement of mummification as indicated by the shrinking and dryness of the whole limb, so different from the moist gangrene due to injury to the main vein.

As to the treatment of the condition, but very little remedial could be done. In some cases it has been suggested to break up the clot by manipulation, so that it might be driven on piecemeal into smaller vessels where it would not produce such serious consequences. But this is an expedient which could rarely be adopted with any success. But failing this, we must in all such cases aim at keeping up the warmth of the limb by wrapping it in cotton wool and placing hot bottles in the bed. In milder cases where there is a chance of the collateral circulation establishing itself, this maintenance of an equable temperature will greatly assist nature in restoring the circulation, and the same may be said of rest and light nourishing diet. Opium may be required to allay pain; but alcohol should, if possible, be avoided at the onset, lest it excite the circulation overmuch.

The prognosis was of course very grave. There appeared to be no sign of collateral circulation, while there was every sign that the limb from the knee downwards was mortifying. The upper border of the purple area was becoming suspiciously defined, while the foot was becoming more and more sallow and greyish. In a patient so very much debilitated as this man was to begin with, all this aroused serious forebodings, and even

the prospect of relieving him by amputation later on was not a good one.

The sequel of this case was, however, more favourable than might have been expected. The gangrene progressed steadily until the whole leg up to some inches above the knee was becoming putrid. Then a large abscess in the lower part of the thigh slowly formed until the limb was a bag of pus. At the same time herpes appeared on the face, nose, and lip, and there was troublesome cough. The general condition, however, improved in a measure. The pulse came down to 100, and also gained in quality. The temperature ranged from normal to 100° and 101°, and he took nourishment well. On December 2nd, I consequently felt justified in removing the gangrenous limb, and accordingly amputated by the modified circular method in the middle of the thigh. Part of the abscess reached up into the stump left after division of the femur 8½ inches above its lower end. Below this all the muscles were rotting and bathed in pus. The wound was flushed with hot water, and the abscess track in the stump scraped clean. No ligatures were required, as the arteries were all blocked. The flaps were stitched closely together, a large drain tube being placed across the stump. A salicylic wool dressing and firm bandaging completed the operation.

In the parts removed the vessels showed no disease, but were blocked by firm dark clot.

Recovery was slow, but steady and uneventful, and the patient left the hospital on January 25th, 1893, with a sound but somewhat conical stump. He has written to me this month (May, 1893), and only complains now of the same great debility from which he suffered before.

I find two other similar cases of thrombosis of arteries during influenza recorded in the *Centralblatt für Chirurgie* of April 1st, 1893. In one, gangrene of the leg was the consequence, and amputation had to be performed, recovery following. In the other, the brachial artery was thrombosed, but no gangrene occurred.

# TWO CASES OF BRANCHIAL FISTULÆ.

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J. J., a fairly healthy lad of 19, was attacked by pneumonia during last summer, from which he made a rapid recovery. Whilst attending him I noticed a small opening on the right side of his neck, large enough to admit a fine probe. A little muco-purulent fluid exuded from it, especially if slight pressure was applied on the side nearer the head. The orifice was seen to be the termination of a tube, about the size of a small quill, which could be felt under the skin, running upwards and backwards towards the right corner of the hyoid bone. The opening was near the front edge of the sterno-mastoid, about 2 inches above the clavicle, in what would be the position of the cleft between the thyro-hyoid and sub-hyoid arches. On the left side a slight dimple was noticed on a corresponding spot, and another rather higher up along the line of the sterno-mastoid; but no orifice or tube could be made out. The fistula gives no trouble, and has existed from birth, so far as can be learned. Rather more fluid comes from it when the patient has a cold, but nothing escapes from it when he is drinking. No other members of his family have anything like it, nor have they any cleft palate or similar deformities connected with the closure of the branchial arches. No cartilaginous nodules or remnants of a cervical rib can be detected in the walls of the fistula. The external ears are well formed, and there are no supernumerary auricles. As we often find in these cases, the patient is slightly deaf; and he has suffered from suppurative otitis.

The second instance occurred in a male infant born in October of last year. Immediately after birth I noticed one or two minute warty growths on the left cheek, which withered away, or were rubbed off, after a few days. In front

of the left ear is a soft, fleshy, flattened mass, probably a supernumerary auricle, and between it and the commencement of the helix is a small, well-defined pit, sufficient to admit the point of a probe, but shallow. No tube was felt beneath the skin, but the hair, of which the child had a plentiful crop, was absent for a short distance above this ear. In every other respect he was a well-formed boy, weighing 9½ pounds at birth, and he has certainly some power of hearing.

Little or nothing appears to be known of the causes which induce failure of the branchial arches to close perfectly at the beginning of the third month of pregnancy. With the lateral clefts and their non-union are connected fissure of the palate and other deformities. Probably the dermoid cysts of the orbit, cheeks, and neck, as well as branchial and aural fistulæ, have a similar origin. On the other hand, a want of union in the mesial line of the body produces ectopia cordis, or vesicæ, and the rare instances of fistula in the middle line of the trachea. The ordinary branchial fistulæ are always well to one side, and never open into the trachea, as supposed by Dzondi, who first described them in 1829. Many of them terminate in a *cul-de-sac*, but others open into the pharynx. Their most frequent site is immediately above the clavicle in the situation of the fourth cleft, and they are often hereditary. Morbid adhesion of the amnion has been described in some cases. My second case is akin to the rare and incomplete fistulæ situated on the helix itself, described by Paget.[1] In such instances the remains of the cleft are carried upwards by the out-growth of the external ear, the auditory canal being often deficient. In the present case a part of the auricle, with a remnant of the canal, seems to have been pushed forward and detached, while the greater portion has developed in the normal site, so that there is an attempt at duplication of the ear. It is uncertain whether in this child there is defective formation of the internal passages, as usually occurs.

[1] *Medico-Chirurgical Transactions*, vol. lxi. 1878.

# ONE VIEW OF HEREDITY.

BY

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IN one of the very many casual and pleasant little conversations I have had with a very good medical friend, of high standing, and hailing, I imagine, from some district north of Bristol, we were talking of the well-known effect of heredity in the moral as well as in the physical constitution of man, a fact generally acknowledged by the use of such expressions as "A chip of the old block," &c.; and he propounded, perhaps not quite seriously, the doctrine that the right treatment and punishment for the habitual criminal (by which is understood that numerous class of men who spend their lives in prison, being committed again and again for the same offence, after having been free probably for only a few days) would be the operation of castration. This would, at any rate, interfere with the continuation of the vicious race, as far as that individual was concerned; and I agreed with his idea. But where did he get the notion? Where could we find a Government strong enough to propose such a remedy? The very existence of such a law among our statutes would of itself deter many from crime. Is it a practical or practicable suggestion? That it would sensibly and materially lessen the number of the criminal population, there can be no doubt whatever; and it would begin at the right end of the difficulty by stopping the supply of children who, from their surroundings, and from the inevitable inherited taint in their blood, would almost of necessity grow up to follow the vicious steps of their parents; and no microscope will ever find the germ of this disease.

I have in my possession a little parchment-bound duodecimo volume, being an account of Scotland, Ireland, and Scandinavia, 1627: "*Scotiæ, Hiberniæ et Sveciæ Descriptio;* Lugd. Bat. CIↃ IↃ CXXVII." The Irish people in early times, according

to this writer, sufficiently resembled the present inhabitants of the country to be a convincing proof of heredity after all these centuries. With reference to the climate, the author says that it is so damp that strangers, when they first come, are subject to diarrhœa and dysentery, "for the cure of which, however, they have a certain wholesome *aqua vitæ* (uskebach [1] *vocăt*);" and the inhabitants are divided into two parts; namely, those who "refuse to obey the laws, and live in an uncivilised way (*vulgo* VVilde Irish, *id est, sylvestres Hibernici, vocantur*), and others who recognise the power of the laws, and live in a civilised way on the eastern and more fertile part of the country (The English Pale)."

But it is principally on account of the description of the inhabitants of Scotland and their customs, as given by this old writer, whose book seems to be chiefly a compilation from other and older sources, that I have referred to this subject. He speaks of the bravery of the Scotch, of their fondness for variegated and striped coloured cloaks, and says: "*In victu, vestitu, totaque rei domesticæ ratione, antiqua utuntur parsimonia.*" He describes their love of sport, but he alludes to the Highlanders of old times as a nation of savages:

"When going out to battle they dipped the points of their swords in the blood of the first animal they met, and tasted it, and this was considered a pledge of prosperity. . . . In carrying on their wars, as well as in their private quarrels, they did nothing by deceit or fraud, thinking it noble to fight and conquer in open battle; and they considered it base to conceal their enmity by flattering speeches and afterwards to attack those who were unprepared . . . ." And then comes the following statement, which induced me to give an account of this old book in these pages, which are generally occupied with scientific and useful work: "Men who had been found after much inquiry to be suffering from epilepsy, idiocy, mania, or any similar disease, which could easily be transmitted to their offspring, were castrated, that the race should not be contaminated by foul contagion by those who might be born to them;

[1] An old Irish word, meaning "water of life," the original of the word "whisky."

and women who were found to be infected with any of these diseases, or with leprosy, were kept far away from any association with men; but if one of these be found to have conceived, she was buried alive with her unborn child; and, to prevent disgrace to their country, gluttons, unnatural feeders and gormandisers, and habitual drunkards were punished in a mild way (*miti supplicio exterminarunt*), being first allowed to eat and drink as much as they liked, and then drowned in the river."

I cannot fairly suggest that a far-fetched heredity induced my friend to make his remark on the treatment of habitual criminals any more than I can ask credit for all that is told us of the barbarous habits of his remote ancestors.

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# Health-Resorts in the West of England and South Wales.

## VIII.

## TORQUAY.

BY

PAUL Q. KARKEEK, M.R.C.S. Eng., L.S.A.,

*Medical Officer of Health for Torquay and St. Marychurch.*

THERE are very few places in England where such a delightful view is obtained immediately on leaving the railway station as in Torquay. In but too many instances, the entrance to a town is through some unpleasant-looking slum or third-class suburb. Here, on the contrary, the view on approaching the town is one of the finest possible. Numerous villas, situated on the slopes of hills or on the edge almost of steep cliffs, interspersed with thick clumps of evergreen foliage, look down on the waters of Torbay, which seem to approach as if to kiss the feet of Torquay in all her beauty. The *tout ensemble* makes a most attractive

picture, and produces an excellent and inspiriting effect on the traveller reaching the town, wearied perhaps by a long journey.

And yet a hundred years ago barely a germ of the Torquay of to-day was to be seen. A miserable little pier or breakwater to shelter the fishing boats, a small boat-building yard, a mill, and a few—very few—cottages scattered about was all that then existed. It was called Tor Quay to distinguish it from Tor, or Old Tor, or Torre, where was the parish church, and which was the best part of a mile away. In those days the people at Tor spoke of the sea-board portion of the parish as "Down at the Quay," and doubtless, like other old inhabitants, looked down with no small contempt on the Quay folk.

The story of Tenterden steeple being the cause of the Goodwin Sands is well known; but almost as curious is the origin of the growth of Torquay, inasmuch as without exaggeration it may be distinctly ascribed to the French Revolution. During the wars which preceded and accompanied this volcanic irruption of the human race, fleet after fleet assembled in Torbay, and sometimes a ship would be waiting here for months until the tale of her consorts was complete, and they could be sent away together on their mission of destruction. When an officer was ordered to take his ship to Torbay and wait for further orders, what more natural than that he should communicate with his family, and that his wife and children should come down into Devonshire and stay somewhere near the ship until she sailed? This was constantly going on, more or less, from about 1780 until 1815, and to suit the requirements of these visitors a few cottages were built, and then a few rows of houses; but all of a small and inexpensive character. During these visitations, it was sometimes observed that one or other member of these families who seemed in a bad way from lung diseases when brought down here, managed somehow to outlive or outgrow this delicacy in an unwonted manner. Consumption and its allies influence the destinies of only too many families, and consequently it did not take long to establish a reputation for Torquay, a place which has since grown from the little fishing village to the beautiful town which we now see. In the year 1801 the population was 838, living in 143 houses; when

Napoleon, a prisoner on board the *Bellerophon*, looked on the spot there were less than 300 houses, with about 1,500 inhabitants. From this time the increase every ten years was by leaps and bounds. In 1821 the number was 1,925; in 1831, 3,580; in 1841, 5,980; in 1851, 11,470; in 1861, 16,400; and when, in 1871, the nephew of the first Napoleon, the so-called Man of Sedan, came here an exile in his turn, the population had grown to 21,657, and the number of inhabited houses increased to 3,071. At the last census, in 1891, it was found that the population was 25,500, and the number of inhabited houses 4,470. Very little of Torquay proper remains on which to build, but her sister parishes, St. Marychurch and Cockington, prospering on her renown, have not been idle; indeed, the sum total of population of the Torquay postal district is not far short of 35,000.

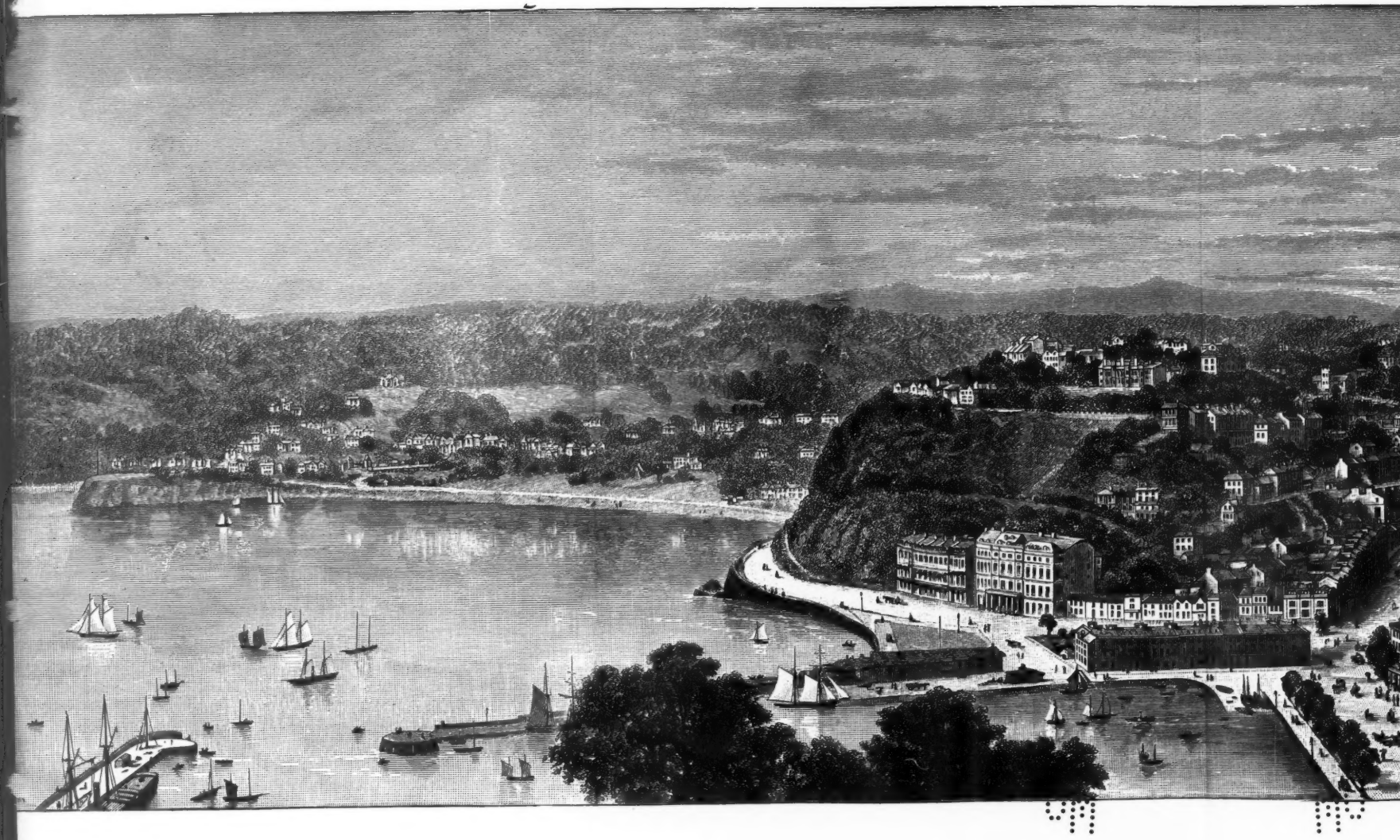
There is not in all Torquay a level piece of ground large enough for a cricket-field; it consists entirely of hills and their valleys, and some of these hills rise to a height of 450 feet above sea level. There is really but one street, although it bears different names in its course of over a mile. Starting as Torwood Street, it soon becomes The Strand, and then Fleet Street; then Lower Union Street, and lastly Higher Union Street. There are some fine terraces, but the style of residence most affected is the villa; and this can be seen here in every possible shape and size, from the cottage to the mansion. Each villa is surrounded by a garden, and the boundaries of each seem lost in plantations of evergreen shrubs, which grow here with great luxuriance. For the most part, the foundations are on solid limestone rock, which assures a dry subsoil; and for the same reason, the roads soon dry, thus enabling the delicate to go out of doors directly after it has ceased raining. The total rainfall in 1892 was 24.13 inches, falling on 145 days, but on 23 there was a fall of only 0.01: it is, however, sometimes higher than this.

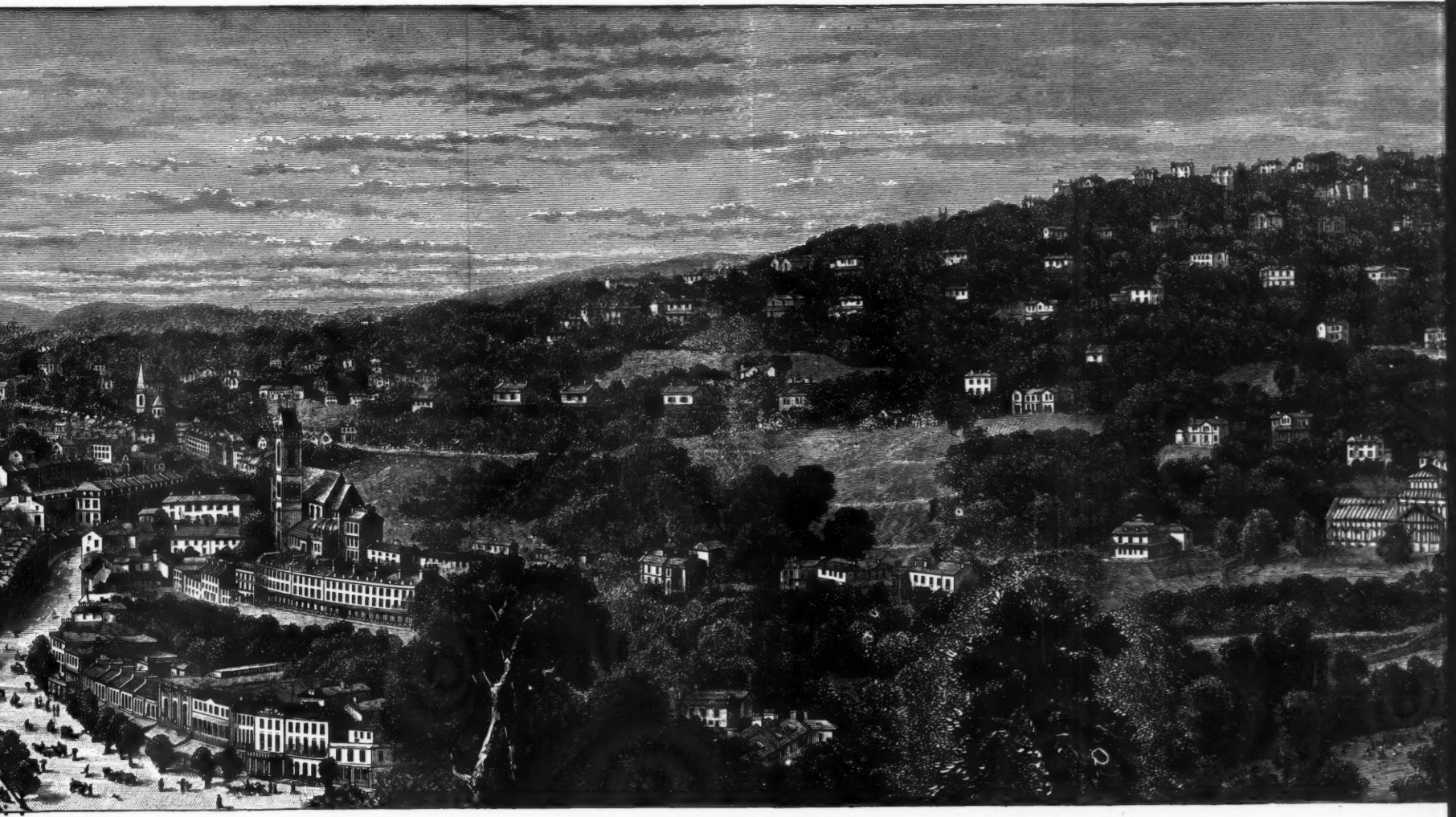
The peculiarity of Torquay is the equability of its climate, which certainly is very marked. During 1892 the *mean* of the maximum temperature was 55.8, and the *mean* of the minimum temperature was 44.4. The *mean* of the maximum

and minimum together was 50.1, and the *mean* range of temperature 11.4, or exactly the same as at Madeira in 1892. It will thus be seen that the tremendous range so distressing to those who frequent the South of France is unknown here. Too great stress cannot be laid on this fact; for although it may be very delightful to be in the hot sunshine all day, it is just as distressing to have intensely cold nights. For those with a feeble circulation, there can be no greater trial of endurance than to keep warm at night under adverse circumstances; and artificial heat, no matter how distributed, is at the best but a poor substitute for the natural supply.

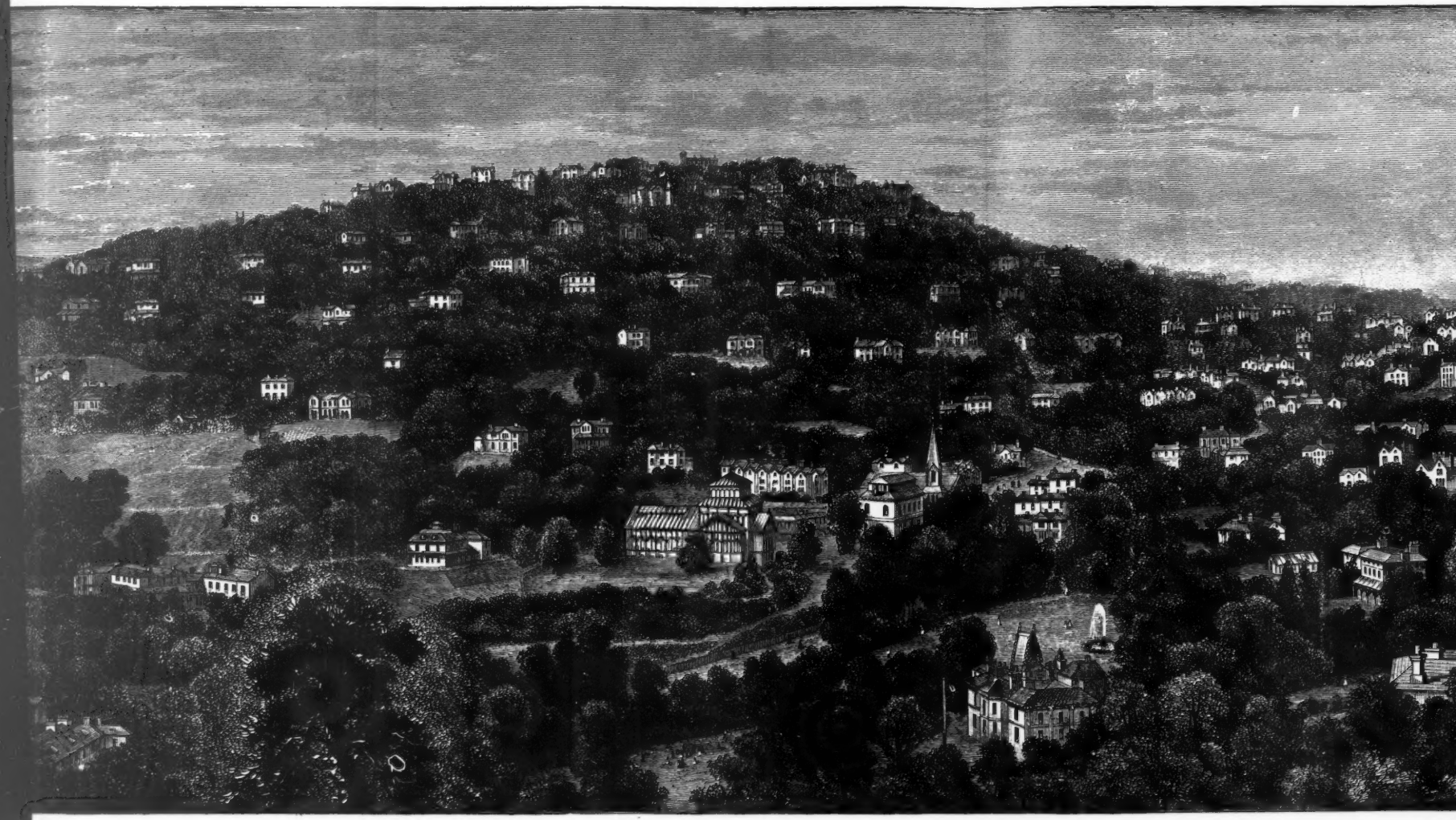
Doctors differ, and so do those learned in climatology; but the fact remains, there is in the climate and the weather that which no instrument has yet been able to record. Call it what one may, there is a something in the air of Torquay which enables a patient with a raw lung to breathe with ease, and another with a winter cough to escape that distressing annuity. Nature goes on her own way, and shows in a manner peculiarly her own what she thinks on such matters; and as I write this, in the month of February, there can be seen in one of the public gardens an orange tree with green and yellow fruit, which has been planted there for two or three years. Close by is a red camellia in full bloom, and a few feet farther on is a magnolia with numerous white flowers fully out. The eucalyptus does well in any sheltered spot, and so do the dracæna, the true palm, hill and swamp flax, and hill bamboo; the yucca and aloe frequently flower here. When it is remembered that nearly all the town has a south and south-west aspect, and that enormous hills act as a wall against the east and north-east, it will be easily understood that it is not difficult to gather in each garden a collection of plants such as it would be almost impossible to keep alive in any other part of England. Some of the residents are fond of making experiments in their gardens, and those of Bemerton, on the Warren Hill, and Duncan House, in Torwood, must be seen to be understood.

There is another curious fact about the climate of Torquay; viz., the coolness of the summer. It is a popular delusion that because a place is mild in winter, that therefore it is very

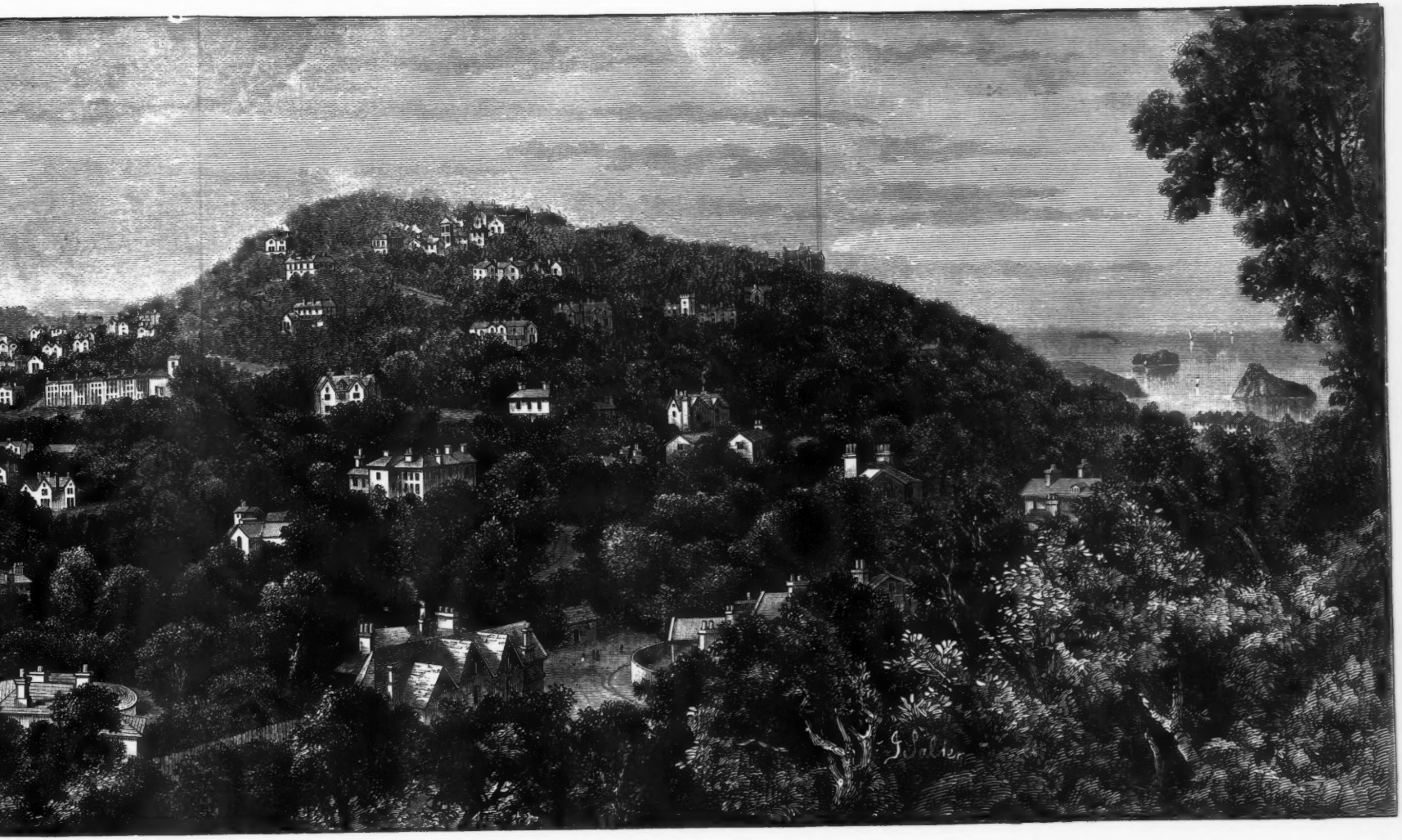




—TORQUAY FROM PARK HILL—



— TORQUAY FROM PARK HILL —



hot in summer. The spot of land on which Torquay is built is almost an island. Torbay encroaches on one side and Babbacombe Bay on the other, and the proximity of the sea renders the air cool. Now, as there are no white cliffs to reflect the sun's rays, but only dark green foliage in the background, it follows that no matter how hot the sun is elsewhere, in Torquay it is always cool; indeed, it is a rare occurrence for the thermometer in the shade to reach 70°. Here again Nature bears evidence of a very striking character: those who attempt to grow peaches out of doors may perhaps get a crop to ripen about once in five or six years; while at Exmouth, only a few miles away, no difficulty whatever is found.

Without going so far as to say that the climate of Torquay is suitable for every person, or for every kind of ailment, it may be worth while to point out what class of cases generally do well here.

All patients requiring rest and quiet in a mild and soothing climate improve greatly. If brought early enough, delicate children will outgrow their weakness, and the troubles of puberty in girls are for the most part easily overcome. Often enough girls are sent here almost bloodless from excessive menstruation: at first they are not infrequently surprised at a total cessation, which may last a few months; and then, with restored strength, a normal flow is established. The many forms of tubercular mischief in children, especially in the early stages, answer to treatment here. Those curses of old age, the winter cough and chronic bronchitis, are reduced to a minimum; and there can be no doubt that hundreds of elderly people manage to live on for years in Torquay whose days seemed only too plainly numbered when in their own homes in the North. In fact, Torquay is preservative to old age.

This is not the place to discuss the vexed question of the climatic treatment of consumption; opinions have varied from time to time, and will continue to do so until the end of time, supposing there be such a disease in those days; but the following remarks are the result of long observation, and written in all fairness. The class of cases which do best are those sent here in the earliest stages—those with bronchial catarrh and irrita-

bility of the mucous membrane. Next in order as likely to derive benefit are those in the later stages, provided the mischief is not active; the senile forms often do nicely, and cases complicated with asthma frequently obtain considerable alleviation. The rapidly advancing and advanced cases, with large excavations, much suppuration, hectic and rapid wasting, are no more likely to do well here than elsewhere; although most of the Torquay practitioners can tell of extraordinary cases which, apparently hopeless, have yet greatly improved. And here it must be noted that every year patients are sent here who ought never to have left their home comforts and surroundings, nor to have been submitted to the fatigue and exposure incidental to transit.

Cases of irritable nervous affections, with deficient sleeping power, generally do well. Overworked brains derive great benefit from a stay here, provided rest, quiet, and regularity of diet are secured. Acute rheumatism is very rare, and many forms of chronic rheumatism get on well. Bright's disease is not a common ailment, calculous affections are extremely rare, and those who live according to the requirements of the climate are seldom troubled with liver. Those, on the other hand, who eat lots of cream and other rich things, and drink as if they were in some cold and bracing climate, of course soon come to grief; and thus learn by experience that in Rome they should do as the Romans do. Most cases of non-neurotic constipation do well without any treatment whatever; the mild air and the soft drinking-water seem to act on these cases like a charm.

The water supply of the town is collected from Moorland streams on one of the offshoots of Dartmoor, about seventeen miles away. There are two reservoirs, holding together about three hundred millions of gallons. The constant service is in vogue, and last year, after the longest drought on record, there were still seventy millions of gallons in store, or about three months' supply. The water is very pure and remarkably soft; and cases of lead poisoning are unknown.

The main drainage was completed some years ago at a cost of over £80,000, under the superintendence of the late Sir Joseph Bazalgette, and is a very perfect and satisfactory work

in all respects. For many years efforts have been made to secure the general health of the town by attention to the individual house, and excellent results have resulted therefrom. There is no register of certified houses kept, because it is felt that there is nothing made by man which will keep in order for ever; and consequently a house that may be in good condition one year and certified for accordingly, may be very defective the next. Any intending occupant can have a house examined by a borough official free of charge, who will report on the condition of the house in question, and point out defects if any exist. Visitors are strongly advised to ask for "a fresh sanitary certificate from the Town Hall." That this plan has not been worked in vain will be seen from the following table:

CAUSES OF DEATH IN TORQUAY FOR TEN YEARS.

| CAUSES. | '83 | '84 | '85 | '86 | '87 | '88 | '89 | '90 | '91 | '92 |
|---|---|---|---|---|---|---|---|---|---|---|
| Small Pox ... ... ... ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Scarlatina ... ... ... ... | 1 | 4 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 9 |
| Diphtheria ... ... ... ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Membranous Croup ... ... | 0 | 1 | 2 | 2 | 0 | 0 | 1 | 1 | 2 | 1 |
| Fevers — Typhus ... ... ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fevers — Enteric or Typhoid ... | 2 | 1 | 0 | 3 | 1 | 1 | 1 | 1 | 2 | 2 |
| Fevers — Continued ... ... ... | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fevers — Relapsing ... ... ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fevers — Puerperal ... ... ... | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Cholera ... ... ... ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Erysipelas ... ... ... ... | 0 | 0 | 2 | 1 | 3 | 1 | 0 | 0 | 1 | 0 |
| Measles ... ... ... ... | 7 | 3 | 5 | 4 | 0 | 12 | 2 | 1 | 3 | 8 |
| Whooping Cough ... ... | 15 | 1 | 5 | 3 | 2 | 1 | 0 | 16 | 0 | 2 |
| Diarrhœa and Dysentery | 8 | 15 | 2 | 3 | 3 | 1 | 3 | 1 | 1 | 3 |
| Rheumatic Fever ... .. | 3 | 0 | 1 | 5 | 1 | 3 | 1 | 0 | 4 | 1 |
| Ague ... ... ... ... ... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Phthisis .. ... ... ... | 56 | 41 | 60 | 61 | 52 | 64 | 52 | 67 | 67 | 60 |
| Bronchitis, Pleurisy, and Pneumonia ... ... .. | 76 | 64 | 55 | 59 | 38 | 52 | 51 | 63 | 53 | 64 |
| Heart Disease ... ... ... | 30 | 32 | 35 | 39 | 39 | 39 | 48 | 36 | 44 | 38 |
| Injuries ... ... ... ... | 5 | 5 | 8 | 3 | 9 | 6 | 10 | 8 | 9 | 13 |
| All other Diseases ... ... | 211 | 218 | 218 | 228 | 184 | 228 | 199 | 235 | 214 | 228 |
| Total... ... ... | 414 | 385 | 396 | 412 | 333 | 408 | 370 | 429 | 402 | 420 |

These figures give an average mortality of 15.5 per 1,000; but every year at least fifty deaths are entered as visitors, strangers, sailors, tramps, patients sent to the various hospitals, etc., etc., and if these be deducted the average will be found to be 13.5 per 1,000; surely a very low figure. The zymotic death-rate for the ten years is .6 per 1,000.

Compulsory notification is in force, and there is a well-arranged hospital for isolating infectious diseases, where private rooms can be obtained.

For visitors of a scientific turn of mind the museum of the Natural History Society offers considerable attraction. Here will be found specimens of Devonshire fauna and geology, and the wonderful finds resulting from the exploration of Kent's Cavern. For those inclined to sport, there are fishing, cricket, tennis, boating and yachting, and one of the finest golf links in the kingdom. In addition to the usual attractions of seaside resorts, such as concerts, theatres, and reading-room, lending libraries, and so on, there is a series of walks and drives within easy reach of surpassing beauty. Excursions to the various parts of Dartmoor can easily be arranged, and the coast line for many miles offers at every turn some special beauty and charm.

It is no easy matter to describe in adequate terms a country so beautiful as this, there are so many sides from which to enjoy it: whether it be the naturalist, the artist, or the dreamy poet, each in his own way will express the delight he finds; but probably all will agree with Mr. Ruskin, and call it "The Italy of England."

# Progress of the Medical Sciences.

## MEDICINE.

Our views on the subject of the treatment of enteric fever appear to be undergoing a considerable change. For many years past it has been assumed that, although the pyrexia might be modified and controlled, the morbid process must run its course, and could not be either arrested or materially modified by any medicinal means. Recent discoveries on the etiology of the disease give grounds for more hopeful expectations with regard to the results of treatment. The bacillus, discovered by Koch and Eberth in 1880, whose appearance and mode of growth are now familiar to all pathologists, is generally admitted to be the actual cause of the chain of phenomena

known as typhoid fever; nevertheless this bacillus is so frequently found in the soil, particularly in the autumn season, also in water, and even in the human intestines, that the bacillus itself must be harmless excepting under particular conditions. Dr. M. A. Boyd, of Dublin,[1] believes that, amongst the conditions which favour acute infection of the intestinal glands, the autumnal gastro-intestinal catarrh is perhaps the most important. Murchison believed in such a gastro-enteric catarrh as a usual precursor of enteric, and Dr. Boyd suggests that such a catarrh, in addition to being brought about by atmospheric changes or by food, may be also produced by absorption of the chemical products of the typhoid bacilli growing in the intestinal contents when present in large numbers in either food or drink. Recent bacteriological work tends to show that the entire process, so far as the typhoid bacillus is concerned, is over in fourteen days; after this period a new set of enemies arrives, and the subsequent changes which so prolong the disease are due to suppurative micrococci and their toxines. These two factors, the preliminary catarrh and the secondary phenomena of septic poisoning, lead to important practical deductions as regards treatment. They may be considered under the two headings of diet and antiseptics.

The dietetic treatment of enteric fever is chiefly of importance in connection with the etiology of the disease and relapse; a paper by Dr. Wallace Beatty[2] sums up what is known as to the connection between diet and relapse, and emphasises the necessity for a limitation in quantity of food. We are glad to find that he adopts what is commonly considered to be the best and safest food; viz., milk and milk only, diluted with a little soda water, lime water, or plain water. He considers boiling to be unnecessary, except when diarrhœa is present: we always prefer to have town milk boiled, as this is the only safeguard against organic poisons. He adds that "sometimes it is necessary to peptonise the milk": we would prefer to say that peptonising is a necessity in all severe cases where the digestive power is failing and there is a tendency to fermentative distension. He objects to farinaceous foods, on the ground that they may cause troublesome flatulence, and further that they are not needed when sufficient milk is taken. He admits beef-tea and beaten-up eggs in cases where the patient is unable to take a sufficient quantity of milk. As regards the quantity necessary, his opinion is that two to three pints of liquid nourishment in the twenty-four hours is an ample supply of food for adults, and that avoidance of excess of liquid food is the best means of counteracting diarrhœa. In the discussion following Dr. Beatty's paper, Dr. Moore stated his belief that once the specific origin of the disease was admitted, no mere error in diet could bring about a true relapse, although it might be a contributory cause of such an accident.

[1] *Trans. Roy. Acad. Med., Ireland*, vol. x., 1892. [2] *Ibid.*

Of the numerous antiseptic drugs which have been more or less successfully used for disinfection of the intestinal tract, carbolic acid appears likely to take the lead. Dr. Gramshaw[1] obtained excellent results with liquid carbolic acid and iodine; and now carbolic acid in pills is found by Dr. Charteris[2] to give results which are equally good. Each pill contains 2½ grs. of pure acid, made up with some innocuous powder and covered with keratin; the pill accordingly does not dissolve in the stomach, and will not be likely to irritate or cause sickness. On solution of the pill in the alkaline fluid of the jejunum the carbolic acid will at once begin to produce an antiseptic effect at the part where it is most likely to be needed and to be of greatest utility.

The combination of phenol with salicylic acid is also coming into favour; salol becomes decomposed in the alkaline contents of the small intestine, where the phenol may exert its usual influence.

Dr. A. M. Anderson, of Dundee, gives an account[3] of twelve cases treated with salol, and he asserts that the course of the disease is arrested on the fifth day of treatment; ten of the patients were convalescent on the fifteenth day of the disease. From the condition of the stools and the permanent suppression of the typhoid symptoms on the fifth day, Dr. Anderson infers the complete destruction of all the specific typhoid poison in the patient's body; he believes that the excreta, before being expelled, are rendered perfectly harmless and incapable of propagating the disease. These results were obtained with doses of ten grains, given every two hours.

Dr. W. C. Cahall[4] obtained excellent results from salol in doses of three grains every two hours. In sixteen cases of undoubted typhoid there was amelioration of all the symptoms; no alcohol was needed, no death occurred, and the average duration was seventeen days.

Dr. Burney Yeo,[5] whilst strongly urging the necessity for and utility of intestinal and general antiseptic treatment, prefers his own method by chlorine, and reports some excellent results therefrom.

It remains to be proved what drug will give the best results, but there is ample evidence before us that the so-called "expectant' method must no longer be tolerated. The policy of acting as if we had reached the ultimate goal of knowledge, with its lamentable results in a disease like typhoid, which as yet is ever with us in all large cities, needs still the stimulating presence of the proposed British Institute of Preventive Medicine, whose Council sends an urgent appeal for liberal support towards a great national necessity for which a large sum is required: in order that it may be carried out on an

[1] *Lancet*, June 23, 1888. [2] *Brit. Med. Journ.*, Dec. 31, 1892.
[3] See *Med. Chron.*, March, 1893.
[4] *Med. News*, Nov. 8, 1890. [5] *Treatment of Typhoid Fever*. 1892.

adequate scale, it is estimated that at least a hundred and twenty thousand pounds will be needed.

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The utility of, and necessity for, antiseptic inunctions in scarlatina have been emphasised by Dr. Curgenven, whose pamphlet was reviewed in the *Journal* for December, 1892. He urges the inunction of some antiseptic volatile oil as a means of obviating the danger of infection during the desquamative stage, and asserts that this process has a specific influence on the course of the disease.

Whether one particular kind of volatile oil or antiseptic ointment is better than another remains to be proved, but it has been abundantly demonstrated that some such antiseptic application to the desquamating skin fixes or destroys the poison, and so prevents the dissemination of the disease. We need no longer expect other cases of scarlatina after the time for danger from exposure to a common cause has passed.

As regards the period of incubation and infectivity, the Clinical Society's Report [1] is a valuable contribution, which bears the stamp of considerable authority, and may be looked upon as our most recent and trustworthy guide. An abstract of this Report appears in the *British Medical Journal*, May 6, 1893, p. 958.

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Everyone knows that most cases of chlorosis may be easily cured by the administration of one or other of the numerous preparations of iron. Dr. Ralph Stockman has discussed at some length the theories of its *modus operandi*.[2] Some of his conclusions are of considerable interest. He gives abundant evidence that iron given hypodermically will cure chlorosis, but he adds that no thoroughly satisfactory preparation for hypodermic use has yet been proposed, and by observations with sulphide of iron he disproves Bunge's theory that inorganic iron is useful simply by absorbing sulphuretted hydrogen in the bowel. He shows that bismuth is quite as capable as iron of doing this, but that in no case is improvement in the blood condition manifest until iron has been substituted for it. From experiments with arsenic, he considers that this drug is not in any sense a hæmatinic, and that it has no direct influence on the blood in chlorosis. He has never seen the slightest improvement from the use of manganese or of hydrochloric acid. Sir Andrew Clark's method of treatment by saline aperients gave very unsatisfactory results when the iron was omitted from the mixture, but the addition of the iron caused rapid improvement in all the cases. Dietetic treatment and rest gave results showing that, whilst

[1] *Transactions*, vol. xxv.
[2] *Brit. Med. Journ.*, April 29, May 6, 1893.

they naturally contribute greatly to bodily comfort and well-being, they cannot be regarded as a specific for the cure of anæmia, or more valuable in it than in many other morbid conditions.

As regards the best form of administration and the dose of iron, no proof has yet been given that any one preparation of iron cures chlorosis more quickly than another, and the most rational course appears to be to use those preparations which disturb digestion least. Reduced iron and freshly-prepared carbonate have been in favour of late. There appears to be little doubt that the ordinary inorganic preparations of iron cure much more quickly than organically-combined iron does. Patients fed on even a rich and varied diet, containing plenty of organic iron, do not, as a rule, recover until inorganic iron is administered. This is one of the great problems yet to be solved, why the patient with chlorosis should not be able to renew the iron of the blood from the abundant supply in the food.

This paper gives overwhelming evidence that inorganic iron is the specific for the chlorotic variety of anæmia, and that no other drug is either useful or needful; but the author's theories are not yet quite confirmed.

Further points bearing on anæmia of other kinds have been commented upon by Smart,[1] who found that arsenic, given alone, did not appear to exert any direct or appreciable effect on the renewal of the red blood corpuscles and hæmoglobin in cases of symptomatic anæmia and chlorosis, but, when combined with iron, it powerfully augmented the hæmatinic action of this drug. In pernicious anæmia full doses produced a most beneficial effect, although iron, "long and freely exhibited" had produced no appreciable result. He emphasises the fact that chlorosis may be regarded as a hæmoglobin anæmia, whilst pernicious anæmia may be looked upon as a corpuscular anæmia.

R. SHINGLETON SMITH.

## SURGERY.

Operations for the radical cure of hernia have now become so frequent that in some of the large hospitals it is said that an operating day seldom passes without one or more of these being on the programme. Nothing very new has been introduced in the principles of operating since Bassini described[2] his method of lifting the spermatic cord out of the inguinal canal, and making a new track for it at a higher level; but various improvements have been suggested in the details of operating, chiefly in the direction of making the operation more thorough and

[1] *Lancet*, Feb. 18, 25, 1893.

[2] *Nuovo metodo operativo per la cura dell' ernia inguinale*, 1889. See also *An. Univ. Med. Sci*,, 1892, vol. iii., C—109.

radical, while there is also a general consensus of opinion that drainage should be as far as possible dispensed with. Among recent papers, the following are perhaps the most important:

Dr. G. R. Fowler, of Brooklyn, in a paper read before the New York Surgical Society,[1] points out that the most conservative of advanced surgeons now agree that a hernia which cannot be retained easily, painlessly, and with certainty, by means of a truss, should be operated upon, with a view of bringing about a radical cure. Those less conservative assert that a hernia which increases in size rapidly, thus requiring frequent changes of size and shape, as well as amount of pressure exercised by a truss, should be subjected to the operation for radical cure. Also that the operation of herniotomy should always include an attempt at radical cure. It would certainly be an anomaly at the present day to witness an operation for the relief of strangulated hernia, in which the surgeon failed to make the attempt, at least, to give the patient the benefit of whatever means were at hand to prevent the recurrence of the accident.

The slight additional time occupied and traumatism inflicted can have no weight when placed in the balance with the incalculable benefit to be derived from the radical cure. Under these circumstances the prognosis of the operation for radical cure becomes the prognosis of the herniotomy for necessity, and nothing more.

The prognosis as regards ultimate cure of the hernia depends upon many considerations, such as age of the patient, size of the openings, nature of the operative procedure, and after-treatment of the patient. The best statistics give for under twenty-five years of age, fully 62 per cent. of permanent cures; in those above this age, 42 per cent. The method of operating adopted by Dr. Fowler is as follows: The sac is first opened and carefully explored, to ascertain that no adherent bowel or omentum occupies its canal. The neck of the sac is then tied, either by simply encircling it, or by a line of through-and-through stitches, in cobble-stitch fashion, chromicised gut being the material made use of in either case. The sac is then cut away beyond the ligature, and the stump allowed to fall within the internal ring. The next point is such a disposition of the spermatic cord as will permit of complete obliteration of the inguinal canal and closure of the ring. For this purpose he employs Bassini's method, modified by Postempski. This consists essentially in displacing the cord in a direction toward the median line, lifting it for this purpose from the canal after completely freeing it, and attaching it by loose loops of buried catgut suture to the abdominal wall beneath the skin. In order to still further counteract any tendency of new protrusion occurring and following the cord, he forces the cord at a point where it emerges from the ring well up into a slit made

[1] *Annals of Surgery*, vol. xvii., part i.

for the purpose in the upper margin of the latter, fixing it by a loose loop of catgut. The canal is then closed by "a crossed suture." The material employed is *crin de Florence*, or silk-worm gut, which is threaded at both ends upon large and full-curved Hagedorn needles. These are passed from behind forward, one through each edge of the divided lowermost layer. The latter consists essentially of conjoined tendon upon the inner margin, and Poupart's ligament upon the outer. The needles, after emerging each from its respective side, are reversed as regards position, that which passed through Poupart's ligament being now carried to the inner side and passed through the skin, again from behind forwards, while that which included the inner margin of the lowermost layer is passed through the skin at the outer margin in the same manner. By tying the sutures over the skin the incision is completely closed. The sutures are placed about three-eighths of an inch apart, and a sufficient number are employed to completely close the wound, no drainage being employed. The sutures are left in place for three weeks, and then removed by cutting upon one side of the knot and drawing them out. The patient thus operated upon is never permitted to sit up in bed for the first six weeks following the operation. No truss is subsequently worn.

Dr. Henry O. Marcy, of Boston, has collected statistics[1] showing the result of operations for the radical cure of hernia. In all he has collated 3,000 cases, and the proportion of deaths was less than 1 per cent. Among them are—

| | | | | | |
|---|---|---|---|---|---|
| Bassini | ... 262 operations | ... 1 death. | | | |
| Championnière | 254 ,, | ... 2 deaths. | | | |
| Schede | .. 165 ,, | ... 2 ,, | | | |
| Banks | ... 106 ,, | ... 0 ,, | | | |
| Park | ... 115 ,, | ... 0 ,, | 85 cured. | | |
| Marcy | ... 115 ,, | ... 0 ,, | 4 relapses. | | |

He considers the essentials of the operation to be—

1. Strict aseptic conditions.

2. A free dissection, in order to lay bare the internal ring, permit of the enucleation of the peritoneal sac, and the separation and elevation of the cord out of the wound.

3. The separation of the sac to its very base before removal. The sac should always be opened, and then tension should be made upon it, and sutures applied in the line of the long diameter of the internal ring; it should then be resected near its base.

4. Having freed the cord to its point of entrance within the abdominal cavity, and lifted it to one side, a row of continuous tendon sutures is inserted from below upwards until the internal ring is closed upon the cord at its exit from the abdominal cavity. The external structures are then united in

[1] *New York Med. Journ.*, Feb. 4, 1893.

the same manner with a deep double layer of tendon sutures, joining the divided muscular wall of the abdomen, and bringing into close apposition Poupart's ligament and the conjoined tendon until the external ring is reconstructed. The structures external to the muscles are approximated by one or more layers of single continuous sutures taken by means of a Hagedorn needle introduced from side to side, and in a similar manner the skin is closed with a continuous buried tendon suture. The entire operation is conducted under the irrigation of a weak sublimate solution, and the parts are afterwards dusted with iodoform before sealing with collodion. No drainage tubes are used.

The following methods of performing the radical cure of femoral hernia are quoted by Salzer[1]: Billroth sews the middle third of Poupart's ligament to the deep fascia, or unites it to the middle septum of the femoral sheath, using a triple silk suture. Czerny uses catgut: Schede, catgut, silk, or silver wire; the latter he has used since 1887, and finds it more certain, and also that it may remain *in situ* without harmful results. He had one relapse in four cases which he had under observation, the relapse occurring after five years. Lauenstein united the falciform process and Gimbernat's ligament after folding the sac in the manner employed by Macewen in inguinal hernia. Bergen fixes the ligated stump of the hernial sac above Poupart's ligament, and sutures the ligament to the aponeurosis of the pectineal muscle, producing a direct union. He advises that the thigh be flexed upon the pelvis during healing.

The author believes that in all these methods, where tension is employed by means of sutures, the resulting scar-tissue is of doubtful utility, as has been shown in the relapse in Schede's case after five years, and advocates the following method, which he has employed successfully: A curved incision is made in the pectineal fascia beneath the femoral vessels, extending from near the crista pectinea to Gimbernat's ligament; a flap is dissected up, its base proximal and joining Gimbernat's ligament; the free or distal border he unites by silk sutures, without tension, to the middle third of Poupart's ligament. Thus is formed a strong fibrous septum, which he deems a practical and certain method for the radical cure of these herniæ. His researches on the cadaver have shown that the pectineal fascia varies in thickness, and his observations lead him to believe that it is thickened in persons who have worn a truss, and in general is thicker in adults.

W. H. HARSANT.

[1] *Centralbl. für Chir.*, 1892, No. 33, abstracted in *Amer. Journ. Med. Sci.*, Jan., 1893.

## OBSTETRICS.

In the Report on Obstetrics in December last, I gave a summary of the history of symphysiotomy up to that date. Since then many cases have been reported.[1] In the chorus of enthusiasm which accompanies a new or revived operation it is well that there should be a warning note, and this has been sounded by more than one surgeon.

Dr. Smyly's case, which I then mentioned, has now been reported in full.[2] As soon as the cartilage was divided the bones sprang apart, tearing the soft parts and the urethra. Although the urethra was sutured at the time, it did not completely heal, and a subsequent operation was required to cure the resulting incontinence.

Dr. Henry C. Coe reports[3] a case in which death took place two months after the operation. Firm union had taken place at the site of the pubic section. Acute mania had quickly supervened upon the operation. At the autopsy no cerebral lesion could be discovered, although partial hemiplegia had been present. Dr. Coe considers that there will always be much difficulty in deciding whether a skilful operator can deliver through a moderately contracted pelvis; and we should therefore be slow in adopting the operation, through fear of being accused of practising it unnecessarily.

In the discussion[4] which followed Dr. Coe's introduction of the subject in the New York Academy of Medicine, the general conclusion was that, if possible, the danger should be avoided of performing symphysiotomy in cases in which it would be impossible by the method to extract a living child, or in which Cæsarian section should be the operation of election. Dr. Edward P. Davis reported a case in which death occurred, from alcoholic pneumonia, seventy-two hours after the operation.

Dr. Henry J. Garrigues, in a dispassionate essay[5] on symphysiotomy, concludes that it is an operation not to be undertaken by anybody who is not familiar with the way of measuring a pelvis, or judging of the size and of other peculiarities of a child *in utero*, who has not the necessary instruments for this and other operations, and who is not capable of performing all other obstetric operations, inclusive of Cæsarian section and Porro's operation. He had a successful case which he operated upon in a common tenement-house. Recovery was hindered by serious puerperal infection.

Dr. W. T. Lusk reports[6] a case in which both mother and child died. The operation was performed under very unpropi-

[1] See current numbers of *Index Medicus*.
[2] *Brit. Med. Journ.*, Ap. 29, 1893. [3] *Med. Rec.*, Ap. 22, 1893.
[4] *Amer. Journ. Obst.*, May, 1893.
[5] *Amer. Journ. Med. Sci.*, Mar., Ap., 1893.
[6] *Ibid.*, Ap., 1893.

tious circumstances, as much damage to the soft parts, including the anterior vaginal wall and the cervix, had been caused by attempts to effect delivery. The mother died from collapse a few hours after the birth of the child.

Prof. A. Pinard, lecturing[1] on December 7th, was able to show all the thirteen mothers upon whom symphysiotomy had been performed, in the Clinique Baudelocque between February 4th and November 14th, 1892. Their general condition left nothing to be desired. In each the pelvis was as firm as before the operation, and there was no trouble in micturating or in standing. All thirteen children were born alive, but three died. Prof. Pinard differs from the American authorities in his operative procedure, which he describes with much detail. He considers that symphysiotomy ought to occupy a foremost place amongst obstetrical operations, because it is essentially a conservative operation. It is his opinion that we are for ever rid of the nightmare of an embryotomy practised on a living fœtus, and that the Cæsarian operation in cases of contracted pelvis will be scarcely ever necessary.

Prof. Pinard does not feel himself yet in a position to speak positively on the relation between symphysiotomy on the one side, and premature delivery and the application of forceps on the other. But he says that it will prevent the induction of labour too prematurely. The fear of an obstacle from the contracted pelvic cavity will no longer haunt us; and knowing that we have the power of enlarging the passage, we can wait calmly for the maturing of the fœtus, so that its capability for extra-uterine life may be certain. Symphysiotomy ought also to make all forcible applications of forceps disappear. Prof. Pinard adds that when a perfect application of the forceps has not, after moderate tractions, effected delivery, there is only one thing to be done; and that is, to withdraw the instrument and practise symphysiotomy.

Dr. J. Edwin Michael thinks[2] that symphysiotomy might save the child in a face presentation with a fixed and jammed posterior chin, when, on account of the position of the head, a Cæsarian section could not be done.

Special attention should be given to a communication by Wehle on "The Scientific Basis of Symphysiotomy," of which a very full translated and illustrated abstract is given in *The American Journal of Obstetrics* for May, 1893. He maintains that the division of the symphysis is always easy, and that a wide separation of the joint can be made without injury to the sacro-iliac synchondrosis. He also asserts that the subsequent ill effects of the operation can be reduced to almost *nil*.

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[1] The lecture, translated by Dr. J. B. Henderson, is published in full in the *Lancet*, Feb. 18, 1893. [2] *Amer. Journ. Obst.*, Feb., 1893.

Much distress and suffering during the lying-in period often accompanies the process of nursing. For anything which can relieve this, both mother and attendants will be grateful.

Dr. Albert H. Ely,[1] writing on the inflammatory affections of the breast during lactation, points out that the exceptionally complex tissue of the breast renders it prone to inflammatory lesions, upon the proper treatment of which much depends, as there now exists strong evidence that a large percentage of the primary carcinomata of the breast are the result of mastitis. Attention should in all cases be particularly given to the nipple, as affections of this predispose to inflammations of the gland when any exciting cause presents. Lesions of the nipple may be divided into erosions, fissures of the apex, and fissures of the base. Dr. Ely insists on the importance of prophylaxis against these forms of sore nipples. No clothing at any time must be worn which will cause depression of the nipples. If this has occurred, and pregnancy exists, immediate efforts should be made to draw them out, and *eau de Cologne* or alcohol used during the early months as a lotion, and an alum solution in the last month. Even when no lesion exists, absolute cleanliness in nursing for mother and child must be insisted on, although it will probably be unnecessary to follow the example of some Continental hospitals, where a solution of bichloride is applied to the breast after nursing, and the child's mouth is cleansed with a solution of boric acid.

When an excoriation exists, Dr. Ely recommends the discontinuance of nursing for a time; and if the breast becomes engorged with milk, the application of pressure and the use of a solution of nitrate of silver. For fissures of the apex he employs a shield, and uses the solid nitrate of silver. For fissures at the base he adds the dusting of a dry dressing with aristol or like powder. For such troubles I have found a one-in-eight ointment of balsam of Peru very serviceable.

Dr. Ely, wisely arguing from the analogy of the brute mammalia, in which engorgement of the mammary gland often occurs when the milk fails to be excreted, urges rest and non-interference in similar conditions in human beings, and would put an end to the pounding and the use of the breast-pump, so popular with fussy nurses. It is difficult to convince them that the milk will go on being secreted, no matter what the withdrawing power may be.

In incipient mastitis, Dr. Ely suggests the trial of abortive measures, carried out upon strict antiseptic principles. The affected breast should be scrubbed with soap and water, and special attention directed towards cleansing the nipple and areola; oil of turpentine is then used over the whole surface; this is followed in like way by ether, and finally the gland is washed with corrosive sublimate solution. All such applications

[1] *New York Med. Journ.*, Dec. 31, 1892.

as poultices, ointments, liniments, and active massage must be abolished.

If the attempts at aborting fail and the formation of an abscess with fluctuation be accomplished, immediate incision should be employed with every antiseptic precaution. For this Dr. Ely gives very elaborate instructions, which no doubt could easily be carried out in a hospital, but which are not easy in general practice. With full surgical anæsthesia, he recommends the careful exploration of the cavity of the abscess, in order to discover any recess, and at the same time counter-incisions should be freely made for the release of any pus which may be lurking in them.

Dr. Samuel L. Weber also pleads [1] for a more thorough dealing with mammary abscess than is customary. He makes one or more incisions from the centre to the circumference of the gland and through it, searching with the finger in every direction for pus or disintegrated tissue, and then, while the irrigator plays, scrapes out all the cavities and sinuses with a large sharp spoon. The curetting must be thoroughly done if prompt healing is desired. Moist dressing, according to the details he gives, is to be used. Dr. Weber says that by this plan the worst cases are cured in from eight to twelve days, whilst by the current method, healing is prolonged to many weeks and even months; and he claims that a chronically indurated breast—a predisposing cause of carcinoma—is avoided.

Dr. S. Marx believes [2] that all inflammations of the breast, excepting those produced by traumatic influences and improperly regulated nursing, are due to an infection specifically caused by the entrance of toxic matter by way of fissures and erosions of the nipple. He therefore urges that nothing should be worn which by pressure might inflict injury upon the nipple of a pregnant woman, that it should be protected with plenty of absorbent cotton, and that the meddling advice of the text-books should be discarded. If the nipple is inverted, drawing it out three times a week by means of a breast-pump will be sufficient. When the nipples are tender and sore, no other measure is recommended than the application of a ten per cent. ichthyol-lanoline salve. Dr. Marx considers that the use of a corrosive sublimate or carbolic solution is injurious. When the nipple becomes fissured and eroded, he uses an ointment recommended by Oehren, and composed of four parts of ichthyol, five each of lanoline and glycerine, and one of olive oil. This soon checks the excruciating pains of suckling, and the fissures rapidly heal. Owing to its consistency, the salve, which is non-poisonous, can be easily and thoroughly washed off. A five or ten per cent. cocaine solution, applied shortly before putting the child to the breast, will ensure perfect freedom from pain.

In cases of threatened mastitis, Dr. Marx, in common with

[1] *Amer. Journ. Obst.*, Jan., 1893. [2] *Med. Rec.*, Feb. 11, 1893.

many others, employs firm compression, but secures this by a binder instead of a roller bandage, which does not ensure uniform pressure. Absolute rest is insisted upon, and iced lead-water applications are regularly applied.

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It would undoubtedly be a good thing if not only the nipples of a pregnant woman were inspected from time to time, but if an examination of a more general character could be undertaken as a matter of routine. An analysis of the urine during pregnancy is becoming more general, though happily negative in an overwhelming majority of cases. A renewed plea for much more than this is put forth by Dr. J. Milton Mabbott,[1] who considers that it is a false modesty on the part of the patient and an unpardonable amount of indifference on the part of the doctor which permits the willing neglect, in any case, of means which some time may save a life. Dr. Mabbott says the examination should be made in all possible cases soon after they come under professional care, and certainly without unnecessary delay if the woman has passed the eighth month. He says that its utility consists in the conversion of podalic or pelvic into cephalic presentations in single pregnancies, the discovery of other malpositions of the fœtus, of a misplaced uterus, a uterine fibroma or carcinoma, an ovarian cystoma, an ectopic gestation, pelvic deformities or placenta prævia. Even if any of the causes of dystocia or of danger can not be remedied at the time of examination, the practitioner is better prepared to render the required assistance at the time of labour.

Dr. Mabbott says that we adopt the policy of indifference, because we are unwilling to add to the already too great anxiety associated with child-bearing; but with much cogency he insists that the assurance that "Everything is as it should be" would repay most women for the annoyance of submitting to the examination, whereas the early discovery of anything wrong would be a distinct gain. He concludes a wise paper by an eloquent aspiration for the speedy advent of the day when every pregnant woman, rich and poor, will be under the care of a qualified physician, and methodical examination be as general as the inspection of a sore throat before treatment. This will involve the relegation of the midwife to, what Dr. Mabbott calls, her legitimate field of nursing.

L. M. GRIFFITHS.

[1] *New York Med. Journ.* Ap. 15, 1893.

# Reviews of Books.

*The Diagnosis of Diseases of the Heart and Thoracic Aorta.* By A. Ernest Sansom, M.D., F.R.C.P. Lond. Pp. xxiii., 567. London: Charles Griffin and Company, Limited. 1892.

By diagnosis should be understood a knowledge, as complete as possible, of all the morbid conditions. The discovery of the name of a disease or morbid condition is not the making of a diagnosis. There are many difficulties yet to be surmounted, and light from any trustworthy source should be welcome.

Dr. Sansom's earnest desire is to inculcate precision—precision of observation and precision of record. His method of pleximetric percussion is a great improvement on the ordinary methods, and his graphic records are equally so. The pleximeter consists of a single piece of vulcanite, a larger plate below and a smaller one above, with a connecting vertical column. The outlines obtained by percussion may be drawn upon the chest-wall of the patient; these are again outlined by an oiled brush, and then transferred from the chest-wall to a sheet of copying paper, on which the oil outline is coloured in by the dermatographic pencils. It is obvious that this plan of recording is one that attains the maximum of precision. Many of these graphic records from a variety of typical cases are bound up life-size in the volume, and they are certainly in every sense worthy of the designation "graphic." True it may be that the heart during life is constantly undergoing changes in size and form, and, further, that its condition is much disguised by various pathological states of the lungs; but, nevertheless, much can be learned by accurate methods of percussion, and important inferences drawn therefrom. Further, the author endeavours to show that just as in physiology the sphygmograph and cardiograph have contributed in a very important degree to advance our knowledge of the processes of the circulation, so these instruments may be of value in the more intricate problems of cardiac pathology. The contents of this book show that the hard-working observer may obtain ample evidence which is not open to him who runs, and that the problems of the circulation can only be elucidated by painstaking and persevering care. The utility of precise records taken by pleximeter, sphygmograph, and cardiograph is abundantly shown, and that "the way of diagnosis is hard" is amply proved.

The book is a great advance on any previous publication:

it contains the best work of one of our best observers, and it is presented to us in a most attractive form—easy to read and tempting to study. A brief review could not do even bare justice to such a book: it requires to be closely and perseveringly studied. There are some books which have cost the authors a lifetime of work, and require almost a corresponding time for digestion and assimilation by the reader; but this book is not quite so exacting, inasmuch as Dr. Sansom gives his arguments and conclusions clearly and concisely, without any excess of statistics or verbosity.

We may quote one paragraph on the much-discussed question of the pathogenesis of the murmurs heard over the pulmonary artery and over the aorta. He writes (p. 285):

"To come to first principles, these are due to vibrations communicated to the area of the thorax superficial to these vessels, the vibrations being first communicated to the portions of the vessels immediately above the valves. The difficult point is, where are these vibrations initiated? It is unlikely that any vaso-motor affection of the great arteries themselves can be invoked as an explanation. The great arterial pouches must vibrate only through communicated vibrations. Their coats are probably not lax, for the tension in both of them in the majority of cases is greater, and not less than the normal. The cause reverts, therefore, with great probability to the conus of the ventricle immediately below the valves. It is this part of the ventricle that has to bear the greatest strain during the ventricular systole, as it is immediately below the weight to be overcome; in the case of the right ventricle, the pulmonic valves, closed by reason of the tension in the pulmonary artery and its branches. The ventricle, weakened by impaired nerve-force, toils to overcome it, and that the obstruction is greater than the normal the accentuated pulmonic second sound testifies. Analogy tells us that the effect of overstrain on voluntary muscle is tremor. So, I take it, fibrillar tremor can be initiated at the over-strained portion of the right ventricle, the conus just below the valves. It seems quite possible that the valves themselves may vibrate in the current. I have noticed in the case of hardened specimens of hearts in firm systolic contraction how pronounced are the muscular bundles carried far into the base of the pulmonic valves. It seemed to me that these might have their function in keeping the semilunes in their due place during diastole.

"The aortic murmur in anæmia and in neuroses is to be explained in an analogous manner. The right ventricle and its conus are more superficial, its muscular walls are thinner, and, in the condition named, it has to contend against a relatively greater obstruction: therefore, the murmurs over its site are more frequent. The apex-murmur due to changes in the left ventricle is, however, by no means infrequent, and its mechanism we have already considered. The aortic murmur

is more rare, but by no means very unusual: it is due to an impairment of the tonus in the muscle of the conus of the left ventricle."

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*Differences in the Nervous Organisation of Man and Woman: Physiological and Pathological.* By HARRY CAMPBELL, M.D. Pp. xi., 383. London: H. K. LEWIS. 1891.

The author of this work has set himself a difficult and complex task. The subject is of interest to all, but especially to those who have a taste for psychology and for the abstruse problems of heredity; and the scientific aspects of the question are treated with great care and in as thorough a manner as possible. In the first part of the book the theories of Weismann and Geddes are discussed and their investigations and suppositions criticised. With some of these criticisms it is difficult to agree, but Dr. Campbell shows that he has sufficient knowledge of the subject to vindicate his right to form opinions of his own.

The relative proclivity of the two sexes to disease is dealt with at some length. This necessitates a quantity of statistics, which might perhaps have been placed in an appendix, and the deductions from them alone left in the text. The conclusions arrived at seem justified from a study of the figures, but too little importance is attached, we think, to accident, drink, and syphilis in accounting for the greater mortality of the male sex. Many, too, would deny that "man varies between wider extremes than woman," and would rather accept Tennyson's opinion, that

> "Men at most differ as Heaven and Earth,
> But women, worst and best as Heaven and Hell."

Quotations abound, and add greatly to the interest of the book; but we are surprised to see another mistaken rendering of the famous lines from *Hudibras*—

> "He who complies against his will
> Is of the same opinion still,"

which is quoted "*Woman convinced* against her will," &c.

The third part of the book, "Psycho-Physiological," is as clear as such subjects can be made in a comparatively short space. There is little that is original in this part, and the deductions are meagre; but the description of the varieties of weak will is interesting, and the last chapter contains some good but rather trite advice.

Much trouble has been taken with this work; varied and extensive reading must have been necessary, and there is abundant evidence of careful thought and reasoning. The different mental characteristics of man and woman cannot

be altogether explained by learning and scientific investigation. Personal observation throughout many years is requisite as well. Here, however, is an important contribution towards a better knowledge of the subject.

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*Clinique des Maladies du Système Nerveux.* M. le Professeur CHARCOT. Leçons du Professeur, Mémoires, Notes et Observations parus pendant les années 1889-1890, et 1890-91, et publiés sous la direction de GEORGES GUINON, Chef de Clinique. Tome I. Pp. 464. Paris: VEUVE BABÉ ET CIE. 1892.

In this volume are brought together the most important of the observations published by Prof. Charcot in various journals during the period from November, 1889, to November, 1891. Essentially it consists of a series of lectures on neurological subjects, written in that graphic style of which M. Charcot is so acknowledged a master. It is superfluous for us to say that all his writings are characterised by originality and profound powers of thought and observation, and are also conspicuous for ready appreciation of the labours of others.

The first lecture describes the symptoms of Morvan's disease, which is probably a variety of syringomyelia; and in this and a second lecture its relationships to the latter disease, and the differential diagnosis are fully considered, with some further remarks on the anatomical and pathological lesions present. A third chapter gives the account of a case seen by Prof. Charcot in 1875, and again in 1890, after the morbid entity of syringomyelia had been in the interval clearly differentiated.

As we should expect in a volume from the Salpêtrière, several lectures deal with various aspects of hysteria. In one there is a masterly account of hysterical tremor, the varieties of which M. Charcot was the first to describe and analyse. Others deal with traumatic hysteria and the rare "œdème bleu" of hysterical patients.

There is a description of relapsing or periodic oculo-motor paralysis. On account of the concomitant headache, and other symptoms, the author prefers the name of migrainous ophthalmoplegia (*migraine ophthalmoplégique*) for this affection.

Specially worthy of study is the excellent series of articles on the ordinary form of ophthalmoplegia, *externa et interna*, and its relations and connections with the other forms of nuclear degeneration, bulbar paralysis, and general muscular atrophy. We may also mention the chapters on atrophy of the muscles supplied by the peroneal nerve as a complication of severe sciatica, on diabetic paraplegia, on the important subject of cerebral syphilis, and on the equally important one of the

aberrant forms of disseminated sclerosis, recently so ably dealt with by Dr. Buzzard. The above will indicate the range of this volume.

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*A Manual of Chemistry.* By ARTHUR P. LUFF, M.D., B.Sc. Pp. xvi., 525. London: CASSELL & COMPANY, LIMITED. 1892.

This book is intended to serve as a medical students' guide to the study of chemical science. It is one of the red-cover series, most of which have already proved themselves to be good friends to the medical student: it appears to supply a real want, and will assist the student in obtaining a sound knowledge of what is essential to every medical practitioner. As a rule, chemistry is a thing to be tolerated; the student has not that love for it which it deserves. This manual will facilitate its study, and will lay a better foundation for physiology and pathology than is generally laid.

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*The Hydro-Electric Methods in Medicine.* By W. S. HEDLEY, M.D. Pp. x., 156. London: H. K. LEWIS. 1892.

From the middle of the eighteenth century, when the first systematic attempts were made to employ electricity as a therapeutic agent, to the end of the nineteenth, is a considerable period in the history of modern medicine; yet we are only just beginning to see our way through the darkness which envelops the subject of electro-therapeutics.

The belief that nervous impulses were really electrical phenomena not unnaturally led us to hope that electricity, if not actually "life," constituted a very essential element in nervous functions, and originated the earlier expectations of great things, which unfortunately were never realised outside the imaginations of hysterical or deluded victims of quackery.

But electro-therapeutics has been developed on more scientific and successful lines, and a knowledge of its methods is daily becoming more essential to practitioners who wish to be in touch with the latest resources of their art.

The book before us does not pretend to be a treatise, nor is it a handbook, but merely a collection of electro-medical papers, "in groups," the first of which gives it a name. It gives detailed information on the methods of administering the hydro-electric baths, and many useful hints on applied electro-therapeutics, which will be interesting to those who have previously mastered the elements of medical electricity; but for those unversed in electrical terms it is rather technical and disconnected, "its chief aim being to examine certain questions from some special, perhaps rather neglected, standpoint."

*Cardiac Outlines.* By WILLIAM EWART, M.D., F.R.C.P. Pp. x., 165. London: BAILLIÈRE, TYNDALL AND COX. 1892.

This will be found a very useful manual both for practitioners and also for students and teachers. More especially, perhaps, it will meet the wants of the two latter. Nothing is more important for the student than that he should early learn and systematically carry out a methodical and thorough examination of the heart. A complete training in this is an invaluable method of inculcating in him methods of accuracy and precision in his daily work, and of impressing upon him the necessity of careful investigation as the first step to a sound diagnosis. Properly grounded in this manner he will be ready to intelligently deal with the problems presented by any particular case. The student who has carefully followed out the teaching of this book, and accustomed himself to the practical application of the methods detailed in it, will possess such a training. The work is throughout illustrated by well-executed outlines. We do not think that it is advisable for the pleximeter to be used until the ordinary method of percussion has been thoroughly mastered; and this, in our opinion, is, of all the methods of physical diagnosis, the most difficult to acquire. We are disposed to think that a short description of the use of the sphygmograph and cardiograph in clinical practice might be added with advantage to future editions of this excellent little book.

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*Medical Microscopy.* By FRANK J. WETHERED, M.D. Pp. xx., 412. London: H. K. LEWIS. 1892.

We have no desire to elevate microscopy into a speciality. The apparatus and methods are needful in every department of science, and to the medical student are indispensable. Every book on clinical diagnosis must deal with the results of microscopic investigations in almost every chapter or page, but year by year the methods are becoming more numerous and more important, and the microscope is now an absolute necessity for accurate diagnosis, not only in renal but in thoracic and other diseases. The student should get to think that his microscope is a necessary part of himself whenever he is called on for clinical work, and during the first few months he does need a special text-book which will teach him at once what to do and how to do it.

Without this he wastes much time in trying various useless methods, and becomes disheartened by constant failures to find the objects for which he is looking, but which he misses in consequence of defects in his mode of working. The experience of others who have preceded him will save much useless work and many a disappointment.

This book is well designed, well printed, abundantly illustrated, and well up to date. It includes the elements of bacteriological methods, and gives the formulæ for the various aniline stains needful for clinical work. It may well take the place of older and better known text-books of microscopy, and we strongly advise all students to purchase it and use it.

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*Reports from the Laboratory of the Royal College of Physicians, Edinburgh.* Vol. IV. Pp. 254. Edinburgh: YOUNG J. PENTLAND. 1892.

This volume quite attains the usual high standard of these *Reports*. It comprises a number of papers of great interest and of high scientific value.

Amongst the longer contributions are two on the Anatomy of the Female Pelvis, by Dr. Webster. Drs. Berry Hart and Lovell Gulland contribute a paper on the Structure of the Human Placenta, illustrated by many beautiful plates of the microscopic appearances, in which they adduce evidence to show that, whilst the serotina is forming, the ovum becomes embedded in it, the serotina reflexa being merely the superficial portion of it, and the serotina proper the deep portion of it. They also believe that the ovum can only graft itself on connective tissue, that there is a special area for safe grafting, which is denuded of epithelium during menstruation, and that it can graft itself in the Fallopian tube only when the epithelium has been removed by disease.

Dr. Noël Paton publishes observations on the valves of the mammalian heart, on the composition and uses of the bile in man (supplementary to a paper in a former volume of these *Reports*), and a full account of a remarkable crystalline globulin which was found in the urine of a patient of Dr. Byrom Bramwell's. The detailed clinical history of this case has been published in the latter's *Atlas of Clinical Medicine*.

Dr. Ralph Stockman contributes a pharmacological study of Urechites suberecta, a drug belonging to the digitalis group, but unlikely to be of therapeutic value on account of its possessing in marked degree the cumulative properties of this group. He has also a paper on thebaïne, narcotine, and certain of their derivatives.

Dr. Alexander Miles, in a thesis which gained the Syme Surgical Fellowship, discusses the mechanism of cranial injuries. He has treated the subject in a masterly way, his conclusions are drawn both from experimental and clinical data, and the paper is one which deserves careful study. It is accompanied by excellent figures.

Dr. James Ritchie gives a good account of a remarkable and little understood disease, general cystic degeneration of the

kidneys. It is illustrated by many good drawings, and forms the best essay on the subject with which we are acquainted. There is an appendix of 88 collected cases, and a list of the literature. Dr. Ritchie thinks that these kidneys should be classed with the adenomata; that they are closely allied to cystic livers, but are not connected with congenital cystic kidney. He seems to us to bring forward strong evidence that the view he takes of the pathology of this affection is the correct one. The theory that regards this form of cystic disease of the kidney as an extreme development of the cysts so often met with in chronic interstitial nephritis has little, in our opinion, to support it.

If we have thus selected a few of the papers for brief remark, it is not that the remaining ones are not also excellent. We must allude again to the beautiful illustrations, and also give the praise which is due to the clearness of the type and the neat and handsome manner in which the volume is turned out. It is a book which we read with much interest and profit, and a useful feature of it is the bibliography which follows each paper.

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*The Operative Treatment of Enlargement of the Prostate.* By C. W. MANSELL MOULLIN. Pp. 82. London: JOHN BALE & SONS. 1892.

This is a series of lectures delivered by the author at the Royal College of Surgeons, and now published by him in book form, with some alterations and additions; the whole forming a very complete record of the views at present held on the surgical treatment of the prostate.

The author acknowledges throughout the obligation he is under to the late Mr. McGill of Leeds, whose work on this subject first drew attention to the favourable results attained by removal of prostatic overgrowths, although Mr. Mansell Moullin has discovered that Amussat performed the operation so far back as 1827, whereas McGill did his first operation in 1887. So great has been the favour bestowed upon the operation since McGill's writings, that no less than 95 operations are here tabulated, only 10 of which are prior to McGill's first case; while in a postscript the author acknowledges reports of many other unpublished cases, including 5 from Mr. Jordan Lloyd of Birmingham and 4 from Mr. Bruce Clarke.

The mortality after the supra-pubic operation is estimated at about 20 per cent., which is not great, considering the advanced age of most of the patients and the fatal nature of the malady. This mortality will, however, be doubtless diminished after further experience, and if the second half of the operations be reckoned separately, the mortality is even now only 15 per cent.

Full reference is made in the lectures before us to other operations upon the prostate besides McGill's, including especially the perineal operations still preferred by some, but most surgeons will agree with the author that McGill's supra-pubic method is the best yet devised.

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*Diseases of the Eye.* By G. E. DE SCHWEINITZ, M.D. Pp. 641. Philadelphia: W. B. SAUNDERS. 1892.

This addition to the large number of text-books already published for instruction on diseases of the eye presents in the method of its compilation no features that require especial notice. It is simply and clearly written; without going very fully into descriptive or theoretical detail, it contains all that the student is likely to require. The various diseases of the eye are well described, together with all their important subdivisions. Treatment receives its full share of attention; for this reason the book can be recommended to the family practitioner. Thus, ophthalmia in its various and serious forms is well dealt with, and the treatment recommended in trachoma includes most of our recent advances on this subject. The numerous anomalies in the movements of the eyeballs are carefully explained, and diseases at the fundus of the eyeball receive sufficient attention.

These are mentioned, not as exceptional chapters, but as types of the standard of the whole book, which, as its author has intended, is adapted rather for students and practitioners who desire to begin the study of ophthalmology than for those who, with a good knowledge of the subject, require a book for reference or for physiological or mathematical descriptions of detail.

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*Miners' Nystagmus.* By SIMEON SNELL, F.R.C.S.Ed. Pp. xi., 143. Bristol: JOHN WRIGHT & Co. 1892.

High praise is unquestionably due to Mr. Snell for the thorough and unprejudiced investigation he has given during the past twelve years to the subject of Miners' Nystagmus. His work, if it did not lay the foundations, has built up most of the superstructure of our knowledge of this malady. The book before us is a handsome, well-printed, and well-illustrated volume, in which Mr. Snell's inquiries and experiments are reported and his conclusions clearly stated. It will be found of interest to all engaged in coal-mining operations, as well as to doctors in charge of pitmen. Although we may not entirely concur in considering the position of the workman as of more importance than the defective illumination, we must admit that Mr. Snell's large experience and strong statements are deserving of full consideration.

*Epitome of Mental Diseases.* By JAMES SHAW, M.D. Pp. xv., 345. Bristol: JOHN WRIGHT & Co. 1892.

The title of this book to some extent disarms criticism. An epitome is hardly to be judged on the same lines as an ordinary text-book. Still, as the author in his preface claims a use for his book as an introduction for students to the more comprehensive treatises and exhaustive monographs, it is necessary to examine this claim a little closely.

Although not without precedents in its favour, we confess we do not like the arrangement whereby the consideration of a disease is split up, under the headings of Etiology, Symptoms, Prognosis, Pathology, and Treatment, into sections widely separated from each other. The book contains an enormous quantity of information, and is a monument of research and industry. But we are bound to say that clearness is often sacrificed to compression, and that the student who has no previous knowledge to guide him will be tempted to lay it down, hopelessly bewildered and confused. To him the very special and technical terminology often adopted will be in itself a stumbling-block, and the various classifications, starting from different bases, more than a little perplexing. For such a reader, the book is wholly unsuited. On the other hand, it will prove valuable to the expert physician, who is able to simplify and illustrate its statements by the cases he can recall in his own practice, while his experience will also enable him to make a decision on various contentious and conflicting matters and opinions, which Dr. Shaw plainly sets out in the text, but still sometimes leaves in doubt. To the teacher and lecturer, who desires a handy and full synopsis of the ideas and practice of various authors on psychology, the work will prove of special service.

Apart from its method and manner of presentation, little fault is to be found with its matter. The chapter on Pathology is especially worth study, and fully describes the experiments and clinical observations bearing on cerebral localisation. The book altogether has been carefully compiled, and is generally trustworthy. We are, however, somewhat surprised in so recent a work as this to see no mention of post-influenzal insanity. We strongly protest against there being any justification for the removal of portions of the cortex with a sharp spoon, for the relief of that train of symptoms it is now fashionable to call paranoia. And while the section on Prognosis is good, Voisin's experience that cases of general paralysis recover under cold baths is most exceptional. When the diagnosis in this disease is undoubted, permanent recovery under any form of medication is so very rare as hardly to justify its expectation as a possibility.

*Eyestrain (commonly called Asthenopia).* By ERNEST CLARKE, M.D. Pp. viii., 168. London: J. & A. CHURCHILL. 1892.

This small handbook will be found of value to all practitioners who may be called upon to treat cases of frontal neuralgia or headache, as well as to ophthalmic surgeons. Much of what has been written on the symptoms of eyestrain is referred to and elaborated. Various forms of asthenopia—accommodative, muscular, and retinal—are described and explained. Refractive errors, neuroses, and muscular insufficiencies and anomalies are fully considered, together with their treatment by lenses, prisms, or operation. The index to the book and the references to authors show that the writer has not taken any narrow view of his subject.

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*Epidemic Influenza: a Study in Comparative Statistics.* By F. A. DIXEY, D.M. Oxford: At the Clarendon Press. 1892.

In this book of elaborate statistics, which appear to be most carefully compiled and tabulated, Dr. Dixey has not only compared the older epidemics of 1847–1848 with the more recent outbreaks from 1889 onwards; but has dealt in detail with the 1891-92 influenza in London, and with the course of the same epidemic in Paris, Berlin, and other cities. A large portion of the book consists of tables and graphic charts representing with great clearness the results of Dr. Dixey's study. The volume should prove useful to the statistician and the student of influenza.

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*Dissections Illustrated.* By C. GORDON BRODIE, F.R.C.S., with Plates by PERCY HIGHLEY. In Four Parts. Part I.—The Upper Limb. London: WHITTAKER & Co. [1892.]

These plates, which are all prepared from original dissections, are very good and accurate. They are much like the well-known plates of Ford and Ellis, but not so large, being two-thirds only of the natural size; they are thus much more portable, and are well adapted for the use of students, who can make use of them as aids to dissection. We have not seen anything of the kind so well done, and can strongly recommend them to anyone wishing to refresh his memory on anatomical points without having recourse to a dissecting-room.

*The Climate of Rome and the Roman Malaria.* By Professor Tommasi-Crudeli. Translated from the Italian by Charles Cramond Dick. Pp. 163. London: J. & A. Churchill. 1892.

Professor Tommasi-Crudeli, who, after many years of hard work as a deputy of one of the colleges of his native province of Tuscany, has lately been made a Senator, delivered a set of lectures in 1885, when President of the Hygienic Institute in connection with the University of Rome, and those lectures are the basis of this work. He also delivered an address on the same subject at the International Medical Congress at Copenhagen in 1884.[1]

Every medical man who is likely to be consulted by patients going to Rome or any other part of Italy—and who in the present day is there that may not be so consulted?—should certainly read this work, as it combats many a preconceived idea as to the climate and water supply of Rome, about which there are undoubtedly erroneous notions as a rule. Professor Crudeli comes to the conclusion that Rome is healthier than many other cities of Europe, and would be the healthiest were it not for the malaria. The drinking-water supplies of Rome are shown to be good; four of the ancient sources are still being used and all are excellent in quality.

Professor Crudeli enters at great length into the composition and geological history of the soil of the different parts of the Agro Romano (Campagna), and the action of meteoric water upon it as it percolates through. His studies in this direction have clearly shown the great errors that have been made during the past twenty years in the many different methods for improvement taken in hand, especially as to cultivation. The great mistake he considers was made in ploughing the hills, which now have often become denuded of their thin covering of soil by its disturbance, and so an increase in the unhealthy swamps in the valleys is produced. Throughout the district it appears that there is an enormous volume of subterranean water lying in the numerous craters of extinct volcanoes and open basins formed by them; the geological formation is also to a great extent like a sponge soaked with water, the exit of which is prevented by many obstacles. So much is this the case, that on many hills to the right of the Tiber it is impossible to plant trees without providing a drain. It appears that the draining off of this water, a vast and difficult undertaking at which the ancients laboured, must be undertaken by the Italian Government. "It is necessary to isolate the ground of the Roman valleys, so that no other waters should penetrate therein, except the rain which falls directly upon it."

[1] *La Production Naturelle de la Malaria et les Assainissements des Terrains Malariques.* Par M. Tommasi-Crudeli.

A most interesting *resumé* of the history of malaria is given from the earliest period. It is shown also that the idea that existed that malaria was produced from stagnant water and marshy ground, through the putrefaction of dead animal and vegetable organic matter which they contain, is erroneous. Many a hill, far removed from water, marsh, or rice-bed, not only in Italy, but, as is well known by ourselves, also in India, is deadly with malaria. Malaria is produced in the earth, not in water. "The *sine quâ non* condition of the production of malaria is the existence of the malarious ferment in the earth." Then, the malarious soil must be kept damp during hot weather, or it will not produce malaria. Consequently, all conditions being equal, malarious regions where stagnant water is found are justly considered as more infected, because then the humidity indispensable to the production of malaria is never absent, even in the driest summer. It appears that the planting of eucalyptus trees is no good, and that the well-known trial made by the Trappist fathers at the convict station at Tre Fontane, a little way from Rome, has been a failure, the inhabitants having been severely attacked—so much so, that Professor Crudeli urged the Government to remove the convicts, which has since been done.

The use of arsenic is shown to be highly preventive; under its use slight attacks are cured by quinine. Quinine, however, may even aggravate an attack in chronic cases. A very simple and efficacious remedy, and a popular one, appears to be a decoction of a whole lemon.

Mr. C. C. Dick, who has resided a great deal in Italy and Rome for some years past, in occupying his leisure time by translating Professor Crudeli's book, has rendered a service to the medical profession in this country which might be well copied by others. Mr. Dick, possessing the friendship of Professor Crudeli, has had the advantage of his translation being revised by him. We have carefully compared it with the original Italian work, and find it most accurate. We can recommend everyone who is at all interested in the subject to read this extremely interesting and exhaustive work, which in its next edition we hope will be supplied with an index.

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*Book on the Physician Himself, and Things that Concern his Reputation and Success.* By D. W. CATHELL, M.D. Tenth Edition. Pp. 343. Philadelphia: THE F. A. DAVIS CO. 1892.

The fact that this book has already run through ten editions proves that it has been favourably received by the profession. We are not surprised, therefore, to find that the whole volume is based on manly common-sense. Dr. Cathell begins with

good advice to young practitioners as to the position and nature of their "offices," their dress and personal appearance, their medical education and general culture. He discusses questions of medical antagonism in a country where there is one doctor to 600 persons, instead of one to 1,650 in Great Britain. He urges attention to the code of ethics of the American Medical Association, and sets a high standard of purity, sobriety, patience, punctuality, and all the other virtues that justly inspire confidence in the profession of both countries. But besides inculcating these high principles, he does not neglect details on the advantages of youth and age in a doctor, on organisation, consultations, the demands of patients for false statements or wrong methods, on being chary with the speculum, on polypharmacy, over-specialism, professional reticence, and the minor duties of the doctor to the patient and the patient to the doctor. So much space is devoted to irregular practitioners that it is evident that they are more in the way of medical men in the States than in England.

Dividing gratuitous patients into God's poor, the devil's poor, and poor devils, he advises abstinence from the second class as private patients. And there are useful suggestions as to fees and bills, and means of self-preservation from patients who take undue advantage of their medical attendant.

Altogether, the book contains plenty of really valuable advice to every age and every grade of the profession; and it may be considered a typical handbook of all the honourable methods of medical life.

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*Disease in Children.* By JAMES CARMICHAEL, M.D. Pp. xvi., 592. Edinburgh: YOUNG J. PENTLAND. 1892.

In a handbook on "Disease in Children" by the lecturer on this important subject in the University of Edinburgh, we naturally look for information at once trustworthy and instructive, and in Dr. Carmichael's book we do not look in vain. It is a handy, compact volume, well arranged, printed in clear type, and thoroughly up to the level of the most recent scientific treatment.

We are pleased to see that early in his work Dr. Carmichael gives a clear statement of the sense—and the only sense—in which the study of children's ailments can be considered a "special" one. He says: "We are dealing with the same diseases as in adult life, modified as they are by the conditions of growth and development going on in the child. It is not strictly correct to talk of diseases *of* children as we would of women, who suffer from ailments peculiarly their own." With this we are quite in agreement.

In the limited space at our disposal, we feel we can hardly do justice to a book evidently the result of much earnest work

in the presence of abundant clinical material, but we must point out that the excellent chapters on typhoid fever, tuberculosis, and gastro-intestinal disorders are typical of the manner in which such subjects should be treated in a manual of this kind.

We shall be pleased if Dr. Carmichael can in a future edition see his way clear to give prescriptions in *single* doses, as most busy men dislike the trouble of "calculating back," and much prefer to get at the dose without first having to solve a small arithmetical problem. Altogether, we can recommend this handbook as a safe guide to the subject of which it treats.

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*Malignant Disease of the Throat and Nose.* By DAVID NEWMAN, M.D. Pp. x., 213. Edinburgh: YOUNG J. PENTLAND. 1892.

In the first part of this book Dr. Newman gives us a great deal of information on the diagnosis, prognosis, and treatment of œsophageal stricture. In the remaining part he treats of malignant disease of the larynx, tonsils, and nose in a way that shows he has had a good deal of practical experience of the cases about which he writes. All his statements are judiciously made, statistics are carefully compiled, numerous authors are quoted, and the clinical records of a good many patients are of much value. The book is very well worth reading.

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*On an Epidemic Skin Disease.* By THOMAS D. SAVILL, M.D. Pp. 64. London: H. K. LEWIS. 1892.

We have perused Dr. Savill's book with great interest and great care, because it is an elaborate and well-written record of an outbreak of a skin affection which, in our present knowledge, is, to say the least, uncommon, although we have reason to believe that cases in many respects very similar have occurred elsewhere than in certain medical institutions in the west part of London, during the year 1891. Dr. Savill gives us a record of 163 cases of this disease which came under his observation at the Paddington Infirmary during the summer and autumn of that year. Then 193 cases occurred at the Marylebone Infirmary, 4 at St. Mary's Hospital, 38, at least, at the Hanwell Asylum, and 25 at the Lambeth Infirmary. The death-rate of Dr. Savill's cases was as high as 12.8 per cent., and was much higher in males and the aged than in females.

The year 1891, possibly from meteorological causes, was remarkable for a good many unusual manifestations of disease. It was in that year that the cases of rötheln occurred at Clifton

College which were very graphically recorded by Dr. Fyffe in the *Bristol Medico-Chirurgical Journal* for March, 1892.

As regards the London cases, we do not consider they were either eczema or pityriasis rubra, although there can be no question that eczema preceded, or was associated with, the disease, and that many of them, in their exfoliative processes, resembled pityriasis rubra. However, at present it is better not to go beyond applying an appellation to the group or rather groups of symptoms described by Dr. Savill, and there seems no reason to object to the one adopted by him; viz., "General Exfoliative Epidemic Dermatitis."

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*A New Pronouncing Dictionary of Medicine.* By JOHN M. KEATING, M.D. AND HENRY HAMILTON. Pp. 318. Edinburgh: YOUNG J. PENTLAND. 1892.

The multiplication of reference books should be enthusiastically encouraged. In each we find something which the others have not; there is fresh material or new arrangement which will make it a desirable companion. General literature and special subjects increasingly need these books, for there is a perpetual broadening out of all departments of knowledge. Life is being lived at such a pace that for many things we have time only to refer to an authoritative summary of the existing knowledge concerning them; and as new phases of inquiry, with additions to scientific terminology, are being presented almost daily, it is imperative that books of the nature of the one before us should be constantly renewed.

Although doctors had no small stock of medical dictionaries, we are sure there is room for this one, which has been compiled chiefly by Dr. Keating, favourably known to English readers as the editor of the *Cyclopædia of the Diseases of Children.* Although on the difficult question of the pronunciation of English words formed from Greek and Latin originals there will always be a considerable variety of opinion, his lead may generally be followed without much damage resulting. It is impossible at present to lay down special rules thereon which will be universally accepted, and this is made abundantly clear from the replies which were received from the scholars who were appealed to in reference to the preparation of this book.

In addition to the dictionary part, there is in the volume other matter covering nearly a hundred pages, and full of interesting information, presented in a useful form, and of so varied a character as to extend from weights and measures and scales to abstruse details, anatomical and pathological.

Altogether, the book is one to have and to use. Its type and arrangement are excellent.

*The Extra Pharmacopœia.* By WILLIAM MARTINDALE. Seventh Edition. Pp. viii., 524. London: H. K. LEWIS. 1892.—It is enough to say of a work which is so widely known and has met with such general acceptance by the medical profession that this, its latest edition, is fully up to date in all respects, and that there will be found in it an adequate account of remedies, both new and old.

*Keep your Mouth Shut. A Popular Treatise on Mouth Breathing.* By F. A. A. SMITH, M.D. Pp. 49. London: BAILLIERE, TINDALL, & COX. 1892.—There is a good deal of common sense in this book, and the question of mouth breathing is a very important one. We do not consider, however, that the surgical measures usually necessary for remedying this method of breathing are at all fit for discussion in a "popular treatise;" nor do we think that a book that is professedly written for the laity will be "popular" with the profession.

*A Primer on the Art of Massage (for learners).* By Dr. STRETCH DOWSE. Pp. vi., 151. Bristol: JOHN WRIGHT & Co. 1892.—"A good masseur must understand the primary laws of physiology and of physics." An attempt is made to define the art; the problem to be solved being stated as follows: "The application of sentient living matter to sentient living matter in divers ways, with varying degrees of energy, according to the resistances in the tissues which have to be encountered and overcome." The text is clear, and the illustrations are excellent. If any book can teach the art, surely this one should succeed.

*Epidemic Pneumonia at Scotter.* By T. B. FRANKLIN EMINSON. Pp. 66. London: W. H. AND L. COLLINGRIDGE. 1892.—This history includes four distinct outbreaks dating from April, 1890, when an appalling fatality of 72.2 per cent. was attributed to sewer-air emanations and simple contagion conjointly. The three more recent epidemics bring strong additional evidence in favour of both these points. These epidemics, traced clearly to defective sanitation in rural villages, convey an important lesson to those whom it may concern.

*Alcohol and Public Health.* By J. JAMES RIDGE, M.D. Pp. vi., 91. London: H. K. LEWIS. 1892.—The author is well known to be a powerful advocate of total abstinence: he has long had the conviction that, unless the practice of total abstinence is physiologically right, it cannot be morally binding npon all; but if it be physiologically right, the force of the moral argument must be irresistible. He endeavours to show that the practice is right both on physiological and pathological grounds, and illustrates the effects of alcohol on protoplasm by means of his well-known geranium cuttings, by experiments on the water-flea, and on the hatching of the eggs of the blow-fly. He produces a powerful array of facts in favour of his conclusion.

*The Prescribers' Guide to the Harrogate Mineral Waters.* By H. J. JOHNSTON-LAVIS, M.D. Pp. 48. London: HENRY RENSHAW. 1892.—This small volume presents in a concise form the main points about Harrogate. The author some years since made a tour of English watering places, and discovered that Harrogate possesses a collection of mineral waters not approached by any locality in England, and only surpassed by one in Europe; viz., the volcanic district of Naples. A dozen years' residence amidst the thousands of thermo-mineral springs of Naples and of Southern Italy and Sicily, some thirty journeys across Europe taking in many of its great spas, and trips to Saratoga, the solfataras, geysers, and hot springs of Iceland, give the writer data by which to estimate the value of Harrogate and its waters. It is needless to add that the author has selected for residence the two districts he names as having the finest collections of mineral waters in Europe; viz., Naples in winter; Harrogate in summer. The addresses will be found at the foot of the preface.

*Anæsthetics: Their Uses and Administration.* By DUDLEY WILMOT BUXTON, M.D., B.S. Second edition. Pp. xiv., 222. London: H. K. LEWIS. 1892.—This most excellent practical manual has been much improved and, having been brought up to date in the present issue, will prove a valuable guide to all who wish to learn the best methods of administering anæsthetics. It is written in a cautious and scientific spirit. The author does not dogmatise upon subjects which are *sub judice*, but gives the reader the benefit of his ample experience and observation. We are glad to notice that too much reference is not made to the work of recent commissions. These are all very well as far as they go, but, inasmuch as their experiments are necessarily made chiefly upon the lower animals, their observations are not to be compared in value to those of the clinical expert. The last words have by no means been said yet on the relative safety of the various anæsthetics, but the book before us summarises our present knowledge on the subject with great fairness and accuracy.

*Coca and Cocaine.* By WILLIAM MARTINDALE, F.C.S. Second Edition. Pp. 76. London: H. K. LEWIS. 1892.—This little book treats of the early history and superstitions in regard to coca. The opinions concerning its value held by modern travellers, especially when they have been exposed to cold and excessive fatigue, and also the ill results of its intemperate use, are related in an interesting manner. Its physiological properties and the various ways in which its salts may be used are well summarised. The addition of salicylic acid to the extent of 1½ parts in 1,000 parts of a 10 per cent. solution of hydrochlorate of cocaine is said to be the best way to prevent the growth of fungi in the solution.

*A Manual of the Operations of Surgery.* By JOSEPH BELL, M.D. Seventh Edition. Pp. xvi., 360. Edinburgh: OLIVER AND BOYD. 1892.—The fact that this work has run through six editions is sufficient proof of its appreciation by those for whom it is written, and the new edition will well maintain its reputation. It is written in a plain and easy style, while at the same time it is contained in a small compass, so as to render it suitable for a working text-book in operations on the cadaver. It will not, of course, compare with many other works on operative surgery for fulness of detail, but as a students' text-book or as a ready guide to the house-surgeon it will prove a trustworthy authority.

*A Guide to the Examinations in Sanitary Science.* By HERBERT JONES, D.P.H. Camb. Pp. 99. London: BAILLIERE, TINDALL, AND COX, 1892.—This little book gives intending candidates a *resumé* of the regulations controlling the Examinations for the Diplomas in Public Health or Sanitary Science instituted by the various examining bodies in the United Kingdom. Selected questions serve to show the extent of knowledge traversed by the examinations, while notes on certain of the questions supply useful hints, not always, however, sufficiently complete, towards their solution.

*A Handbook of the Diseases of the Eye, and their Treatment.* By HENRY R. SWANZY, M.B. Fourth Edition. Pp. xv., 536. London: H. K. LEWIS. 1892.—We gladly welcome another edition of this popular textbook, and we recommend it without hesitation to students and practitioners of medicine as one of the best, perhaps the very best, they can use in the study of eye diseases. In it Dr. Swanzy gives—as he has aimed to do—a succinct and practical account of his subject in its most modern aspect; and though he points out the necessity for consulting original papers when complete information is required, we can from experience of the book assert that it often contains information where larger volumes will be found wanting, and that reference will rarely be made to it in vain. Every branch of ophthalmology has been carefully considered, and all that is of importance regarding it finds mention in Dr. Swanzy's book. The illustrations are numerous and graphic; the printing and paper excellent; and the size of the volume convenient for the student's use while engaged in study in the hospital wards or out-patient department.

*Hygiene and Public Health.* By LOUIS C. PARKES, M.D. Third Edition. Pp. xx., 523. London: H. K. LEWIS. 1892.—Dr. Parkes has introduced some new matter into this edition, dealing with smoke prevention, weather observations, influenza and diphtheria, which adds considerably to the value of the book. The manual is now well known as a plainly written and useful introduction to Hygiene, very suitable for students' use, and very trustworthy in its information.

*Golden Rules of Surgical Practice.* By E. HURRY FENWICK, F.R.C.S. Third Edition. Pp. 67. Bristol: JOHN WRIGHT & Co. [1892.]—The author of this little work, who in this edition has disclosed his identity, seems to consider that Surgery is a *very* exact science, for he has drawn up what he calls a "drill-book" consisting of a number of rules beginning with "always" or "never," and strung together in paragraphs, alphabetically arranged under such headings as "Bones," "Chest," "General," etc. We presume, as the book has reached a third edition, that it has met the requirements of some students, but we very much doubt if any useful instruction can be conveyed by a series of short sentences—good and valuable as many of them are—entirely disconnected from one another and unaccompanied by description or explanation.

*From "Œsypum" to "Lanoline."* Pp. 48. London: BURROUGHS, WELLCOME & Co. 1892.—The title of this *brochure* reads very much like a tourist arrangement, say "From Greece to Berlin," or to be more exact, "From Dioscorides to Liebreich." It is interesting, though at the same time somewhat humiliating, to contemplate for how many centuries the human race may have a good thing within its reach, and yet never extract the best out of it. Until quite recently "wool-fat" was prepared in almost the same way as it was among the ancients; it was not until Professor Liebreich made careful investigations into the properties of the fats of animal integument that cholesterin fat was obtained in all its purity. This which is now known as Lanoline is, on account of its penetrative properties, better suited than lard for the basis of ointments. We can speak very favourably of many of the formulæ given, but must take exception to the claim put forward for the utility of the preparation as a vehicle for the administration of remedies in rheumatic and nervous affections.

## Notes on Preparations for the Sick.

**Bynin Liquid Malt. Byno-Pancreatin. Byno-Pepsin. Byno-Hypophosphites. Coca-Bynin.**—ALLEN & HANBURYS, London.—These preparations have as their basis a concentrated *liquid* extract of malt. They are therefore more pleasant to take, inasmuch as they are free from the troublesome viscidity of the ordinary malt extracts.

**Thyroid Extract.**—BRADY & MARTIN, Newcastle-on-Tyne.—The utility of the thyroid gland was abundantly shown in our Report on Medicine in the number for March. It is clear that

cases of myxœdema must be given the benefit of treatment by thyroid gland, or the preparations therefrom. Messrs. Brady and Martin supply the fluid extract in two forms: one for administration by the mouth, and the other for use hypodermically. The extract is also prepared as a powder, which has the advantage of being more stable.

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**Tabloids of Ichthyol; Resorcin; Ergotin; and Blaud's Pill. Peptonic Tabloids. Sugar-coated Tabloids.**—BURROUGHS, WELLCOME & Co., London.—**Ichthyol** Tabloids contain 2½ grains of the sodium sulpho-ichthyolate, and are coated with sugar. They are readily soluble, and the disagreeable flavour and odour of the drug are completely concealed. It is said that ichthyol by extracting oxygen from the tissues becomes a reducing agent, producing an invigorating and antiseptic influence throughout the body and an astringent effect on the blood vessels, and hence that it is of immense value in the internal treatment of those diseases in which hyperæmia and enlargement of capillaries occur, more especially in acne rosacea, chronic rheumatism, chronic catarrh of the stomach, and other chronic affections of the skin and mucous surfaces. The drug, derived from the distillation of a bituminous quartz found in the Tyrol, and deriving its name from its origin in what is believed to be the remains of decomposed animals and fish, has no agreeable properties to recommend it, and would be inadmissible as an internal medicine but for its elegant preparation in the form of a sugar-coated tabloid. In this form the many virtues which it is said to have may be amply verified.

**Resorcin** Tabloids contain three grains of the drug: they are soluble, and convenient for the preparation of solutions for topical application in cases of lupus, epithelioma, or cancer. They are said to be of use in cases of fermentative dyspepsia and consequent diarrhœa. As an intestinal antiseptic they should be of service, and if given frequently would also prove to be an efficient antipyretic agent.

**Ergotin** Tabloids contain three grains of the purified extract of ergot, and they are sugar-coated. They are prepared with care, and may be relied upon to have the full therapeutic activity of the best preparations of this popular drug.

**Blaud's Pill** Tabloids contain four grains of the carbonate of iron in an unoxidised condition. Upon wetting the surface the green colour of the ferrous carbonate is at once manifest. The ingredients of the tabloids do not decompose till after the dose has been swallowed, when the ferrous carbonate in an active state is produced.

**Peptonic** Tabloids contain internally zymine with lactophosphate of lime: this combination is coated over with

keratin. Pure pepsine is then added, and the completed tabloid is covered over with white sugar. The pepsine peels off in the stomach, and the other ingredients pass into the intestine intact to assist in the work of pancreatic digestion. Such a tabloid as this must give the zymine a better chance of displaying functional activity than when, being taken in the ordinary way, it has to run the risk of becoming inert in the stomach.

**Sugar-coated Tabloids**, containing various drugs, are now supplied: they are promptly soluble, easy to swallow, and efficient in their action.

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**Malto-Carrageen. Maltine with Lime.**—MALTINE MANUFACTURING CO., London.—The first of these should be useful in chronic pulmonary affections: it combines the nutritive and demulcent properties of maltine and carrageen, with the active principle of an efficient expectorant—yerba santa. The second contains hypophosphites of lime, soda, and iron, in combination with the concentrated extract of various cereals commonly known as maltine.

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**Peptonised Beef Wine, with Coca. Peptonising Tablets.**—T. BUXTON, Clifton.—The beef peptone, with coca wine, must be a valuable restorative, and is a useful kind of medicine in convalescence from acute diseases and in conditions where more active medication is not necessary.

The peptonising tablets are very convenient for preparing half-pints of peptonised milk for immediate consumption. For larger quantities more tablets than one will be needed, and the product should be boiled when not required for immediate use. We have found them to be convenient and effective.

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**Zinc-Gelatin.**—J. F. EARDLEY, Sheffield.—This, suggested by Mr. Dale James, is a preparation of zinc and gelatine, of a firm consistence. The tin in which it is sent out is placed in a saucepan of hot water, and the softened preparation can then be applied to a patient's back with a brush, or dabbed on with cotton wool. It forms a firm and impenetrable covering for the skin, and prevents bed-sores in patients who are constantly wet.

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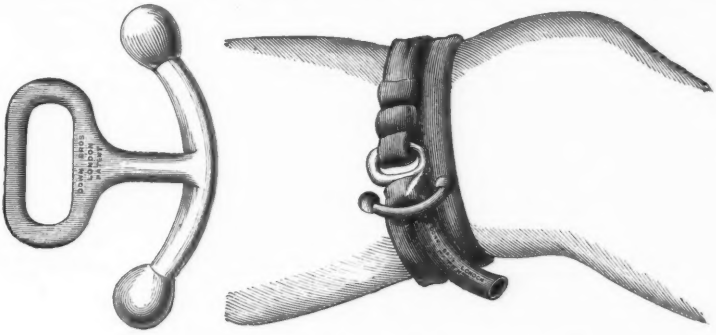
**Samways' Tourniquet Clip** (Anchor Pattern).—DOWN BROS., London.—This most useful contrivance consists of a piece of rubber tubing, furnished with a steel clip shaped like an anchor at one end. It can be applied in the easiest possible manner by first passing the stretched rubber once or twice round the

limb, and then beneath one of the anchor flukes, over the shank, and back beneath the other fluke. Soft rubber tubing is



now universally acknowledged to make the best tourniquet, and the anchor clip seems to make a simple and effectual fastening.

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**Gem Menthol Inhaler.**—T. CHRISTY & Co., London.—This is a most compact but efficient instrument. It can be readily carried in the waistcoat-pocket, and is always ready for use. At a temperature of 50° F., or less, menthol does not volatilise rapidly enough to give good results; but if the inhaler is held in the hand for a few moments the menthol volatilises freely. The inhaler becomes strongest when carried in the pocket, which keeps it at a temperature of nearly 98° F.

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## Bristol Medico-Chirurgical Society.

*April 12th*, 1893.

Dr. E. MARKHAM SKERRITT, President, in the Chair.

Dr. ARMAND RUFFER gave an account of some recent researches by himself and Mr. H. G. Plimmer, on micro-organisms found in cancer, and exhibited numerous photographs with the oxy-hydrogen lantern, and microscopic slides. The parasites to which he referred had been found in various carcinomata, but he limited himself to a short description of those seen in cancer of the breast. The organism often appeared in the nucleus of the cell; it was a small, round body, staining with hæmatoxylin in osmic acid preparations. At first it presented no structure, but later a small nucleus and capsule became apparent, and a peripheral radiation. It ultimately slipped from the

nucleus into the surrounding protoplasm. As the parasite grew, it often became granular, and contained peculiar chromatin bodies; the capsule had a well-marked double contour. Such bodies could be plainly seen in fresh specimens kept on the warm stage, as well as in stained cover-glass preparations fixed with the vapour of hydrocyanic acid, and stained with Biondi's reagent. The mode of reproduction was by single fission, the nucleus first dividing; but division into eight, sixteen, or more might occur. Whether these young parasites were of the nature of spores it was impossible at present to say. Outside the body these organisms appeared to resist putrefaction much longer than the tissues in which they were found. Lastly, Dr. Ruffer drew attention to the fact that it was useless to search for these parasites with old methods, and that it was only by using the best fixing and staining reagents that satisfactory results could be obtained. At the conclusion of the meeting a vote of thanks to Dr. Ruffer and Mr. Plimmer was carried by acclamation.

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*May 10th*, 1893.

Dr. E. MARKHAM SKERRITT, President, in the Chair.

Dr. EDGEWORTH exhibited a child with bilateral facial paralysis dating from birth. Electrical stimulation gave no results, but there was slight voluntary movement at the angles of the mouth. No sign of injury to the skull could be detected. It was thought the condition might be due to the application of forceps in delivery.

Mr. C. A. MORTON showed a child with genu varum, following a fracture of the femur a short distance above the knee. There was marked elongation of the external condyle, and it was pointed out that the pathology of this case was similar to that of knock-knee with enlargement of the *internal* condyle. Mr. Morton also exhibited an infant with talipes calcaneo-valgus, associated with intra-uterine bending of the bones of the leg; specimens of Fallopian tubes, uterus and vagina of child affected with tuberculosis; lymphatic nævus of tongue; and sarcoma of peritoneum causing fatal perforation.

Dr. J. E. SHAW and Mr. PAUL BUSH brought before the Society a case of lesion of the cauda equina. This will be published *in extenso* in the *Journal*.

Mr. GREIG SMITH showed the Fallopian tubes, ovaries, and a small uterine fibroid, removed from a lady aged 23. Portions of these structures were markedly calcified.

Mr. MUNRO SMITH and Mr. C. A. MORTON showed microscopic sections of two complex tumours—one an adenomatous growth from the soft palate, the other from the eyebrow. Both were thought to be congenital.

Dr. MICHELL CLARKE showed hydatid cysts from the brain, which hollowed out a large portion of the cortex and gave rise to Jacksonian convulsions, &c.; also various microscopic sections of the spinal cord from cases of progressive muscular atrophy and ascending degeneration.

Dr. WATSON WILLIAMS gave a demonstration on some interesting laryngeal cases.

G. MUNRO SMITH, *Hon. Sec.*

# The Library of the Bristol Medico-Chirurgical Society.

**On and after July 1st the Rooms in the Medical Wing of University College, Bristol, which are to be devoted to Library purposes, will be open to Members of the Society.**

*The following donations have been received since the publication of the list in March:*

| | *May 31st*, 1893. |
|---|---|
| W. M. Barclay (1) ... ... ... ... ... ... ... | 3 volumes. |
| Alexander Carr (2) ... ... ... ... ... ... ... | 1 volume. |
| Mrs. J. P. Challacombe (3) ... ... ... ... ... | 124 volumes. |
| F. R. Cross, M.B. (4) ... ... ... ... ... ... | 2 ,, |
| J. K. Morgan (5) ... ... ... ... ... ... ... | 1 volume. |
| Bertram M. H. Rogers, M.D. (6) ... ... ... ... | 2 volumes. |
| Sir James Sawyer, M.D. (7) ... ... ... ... ... | 1 volume. |
| R. Shingleton Smith, M.D. (8) ... ... ... ... | 1 ,, |
| The Royal Medical and Chirurgical Society (9)... | 6 volumes. |

Unbound periodicals have been received from Mrs. Challacombe, Dr. Michell Clarke, and Mr. F. R. Cross.

## EIGHTH LIST OF BOOKS.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

| | | |
|---|---|---|
| **Aitchison, R. S.** ... | *A Medical Handbook* ... ... ... ... ... ... ... | 1893 |
| **Ashwell, S.** ... ... | *Diseases of Women* ... ... ... ... (3) 2nd Ed. | 1846 |
| **Averill, C.** ... ... | *Operative Surgery* ... ... ... ... ... (3) 2nd Ed. | 1825 |
| **Badham, C.** ... ... | *On the Bronchial Inflammation* .. ... ... ... (3) | 1808 |
| **Beausoleil, R.** ... | *Revue Statistique des Maladies de la Gorge, du Larynx, du Nez et des Oreilles* ... ... . ... ... ... | 1893 |

**Bell, C.** ... ... ... *The Anatomy of the Brain* ... ... ... ... ... (3) 1802
,, ... ... ... *Operative Surgery.* 2 vols.... ... ... ... (3) 1807–9
,, ... ... ... *On Injuries of the Spine and of the Thigh-bone* .. (3) 1824
**Bell, J.** .. ... ... *The Anatomy of the Human Body.* 2 vols. (3) 2nd Ed. 1797
**Bennett, W. H.** ... *Abdominal Hernia* ... ... ... ... ... .. ... 1893
**Blake, A.** ... ... *Aphorisms illustrating Cases of Accouchement, &c.* (3) 1817
**Bramwell, B.** ... ... *Atlas of Clinical Medicine.* Vol. II., Part II. ... 1893
**Brodie, Sir B. C.** ... *On Diseases of the Joints* ... ... ... (3) 4th Ed. 1836
**Browning, W. W.**... *Modern Homeopathy* ... ... ... ... ... ... ... 1893
**Burns, J.** ... ... *The Principles of Midwifery* ... ... (3) 5th Ed. 1820

**Celsus, A. C.** ... ... *Medicinæ Libri Octo.* (Ed. by G. Futvoye) ... (3) 1837
,, ... ... *do.* (Tr. by J. Greive). (3) 3rd Ed. 1838
**Chamberlaine, W.**... *Tyrocinium Medicum* ... ... ... ... (3) 2nd Ed. 1819
**Cheselden, W.** ... *The Anatomy of the Human Body* ... (3) 13th Ed. 1792
**Clarke, Sir C. M.** ... *On the Diseases of Females.* 2 parts. (3) 3rd Ed. 1831
**Cloquet, J.** ... ... *Manuel d'Anatomie descriptive du Corps Humain.* .. ... ... ... ... .. ... ... 3 vols. (1) 1825
**Cooper, Sir A.** ... *Lectures on the Principles and Practice of Surgery* (3) 2nd Ed. 1830
**Cowan, C.** ... .. *A Bedside Manual of Physical Diagnosis* (3) 2nd Ed. 1842
**Cruveilhier, J.** ... *Descriptive Anatomy.* (Tr. by W. H. Madden). 2 vols. ... ... ... ... ... ... ... (3) 1841-42

**Dewees, W. P.** ... *Midwifery* ... ... ... ... ... ... ... ... (3) 1825
**Doyen, E.** ... ... *Traitement Chirurgicale des Affections Inflammatoires et Néoplasiques de l'Utérus et de ses Annexes*... ... 1893

**Falconer, M.** ... ... *Synopsis of Lectures on Anatomy and Surgery* ... (3) 1777
**Fyfe, A.** ... ... ... *A Compendium of Anatomy.* 4th Ed. (3) Vols. I., III. 1810

**Gibson and W. Russell, G. A.** *Physical Diagnosis.* ... ... ... 2nd Ed. 1893
**Gill, J. B.** ... ... *An Epitome of Surgery* ... ... ... ... ... (3) 1860
**Graham, T. J.** ... *The Best Methods of Improving Health.* (3) 6th Ed. 1851
**Gray, S. F.** ... ... *A Supplement to the Pharmacopœias* ... ... ... (3) 1818
**Green, J. H.** ... ... *The Dissector's Manual* ... ... ... ... ... (3) 1820
**Gregory, J.** ... ... *On the Duties and Qualifications of a Physician* (3) 2nd Ed. 1805
,, ... ... *Conspectus Medicinæ Theoreticæ* ... (3) Edito Sexta 1818
**Griffin, J. J.** ... ... *Chemical Recreations.* Part I. ... ... (3) 8th Ed. 1838

**Hamilton, A.**... ... *On Female Complaints* ... ... ... ... ... ... (3) 1792
**Hamilton, J.** ... ... *Management of Infants and Children* ... (3) 3rd Ed. 1821
**Harris, J. D.** ... ... *Scab Healing*... ... ... ... ... ... .. ... ... 1893
**Harvey, W.** ... ... *Anatomical Exercises* ... ... ... ... ... ... (3) 1673
**Hooper, R.** ... ... { *The Anatomist's Vade-Mecum* ... ... ... ... (3) 1811 / *Examinations in Anatomy, Physiology, &c.* (3) 3rd Ed. 1814
*Hospital-Ward to Consulting-Room, From* ... ... ... ... ... ... ... 1893
**Hudson, T. J.** ... *The Law of Psychic Phenomena* ... ... ... ... ...[1892]

**Inman, T.** ... ... *Foundation for a New Theory and Practice of Medicine* ... ... ... ... ... ... ... ... (3) 1860

**Jones and E. H. Sieveking, C. H.** *Pathological Anatomy* ... ... ... (3) 1854
**Jones, C. W.** ... ... *Surgical Lectures* ... ... ... ... ... ... ... ... (3) 1819

**Kenwood, H. R.** ... *Public Health Laboratory Work* ... ... ... ... ... 1893
**Krafft-Ebing, R. v.** *Psychopathia Sexualis.* (Tr. by C. G. Chaddock)... 1893

**Laennec, R. T. H.** .. *Treatise on Diseases of the Chest.* (Tr. by J. Forbes) (3) 4th Ed. 1827
**Lankester, E.** ... *On Food*... ... ... ... ... ... ... ... ... (3) 1864
,, [Ed.] *Haydn's Dictionary of Popular Medicine* ... (3) 1874
**Lescher, F. H.** ... *The Elements of Pharmacy.* ... ... (3) 3rd Ed. 1869
**Lewers, A. H. N.** ... *Diseases of Women.* ... ... ... ... ... 4th Ed. 1893
**Liston, R.** ... ... *Practical Surgery* ... ... ... ... ... (3) 4th Ed. 1846

**Mackenzie, C.** ... *One Thousand Experiments in Chemistry* ... ... (3) 1821
**Macready, J. F. C. H.** *A Treatise on Ruptures* ... ... ... ... ... ... 1893
**Mann, J. D.** ... ... *Forensic Medicine and Toxicology* ... .. ... ... 1893
**Marshall, J.** ... ... *The Human Body.* Vol. I. ... ... ... ... (3) [1860]
**Martinet, L.** ... ... *Pathology.* (Tr. by J. Quain) ... .. (3) 2nd Ed. 1827
**Merriman, S.**... ... *Difficult Parturition* ... ... ... ... (3) 2nd Ed. 1814
*Mother's Thorough Resource Book, The* ... ... ... ... ... ... ... (3) [N.D.]

**Nelson, J.** ... ... *The Government of Children* ... ... ... ... (3) 1753

**Odell, W.** ... ... *Recreation* ... ... ... ... ... ... ... ... ... 1893

**Paris, J. A.** ... ... *Medical Chemistry* ... ... ... ... ... ... (3) 1825
**Pepper, W.** [Ed.] ... *An American Text-Book of the Theory and Practice of Medicine.* Vol. I. ... ... ... ... ... ... ... ... 1893
*Pharmacopœia, British* ... ... ... ... ... ... ... ... ... ... (3) 1867
**Phillips, J.** ... ... *Outlines of the Diseases of Women* ... ... ... ... 1893
**Pott, P.** ... .. ... *Chirurgical Works.* Vols. II., III. ... ... ... (3) 1783
*Primitive Physick* ... ... ... ... ... ... ... ... ... ... (3) 2nd Ed. [1747]

**Rayer, P.** ... ... *Diseases of the Skin—Atlas.* (Tr. by R. Willis) (3) 1835
**Reichenbach, Baron C. v.** *Dynamics of Magnetism, Electricity, &c.* (3) 2nd Ed. 1851
**Reynolds, J. R.** .. *Diagnosis of Diseases of the Brain, &c.* ... ... (3) 1855
**Ridge, J. J.** ... ... *Alcohol and Public Health.* ... ... ... 2nd Ed. 1893
**Russell, G. A. Gibson and W.** *Physical Diagnosis.* ... ... ... 2nd Ed. 1893
**Ryan, M.** ... ... *The Medico-Chirurgical Pharmacopœia* (3) 2nd Ed. 1838

**Sammarthanus, S.**... *Pœdotrophia.* (Tr. by H. W. Tytler) ... ... (3) 1797
**Sawyer, Sir J.** ... *Practical Medicine.* ... ... ... ... (7) 2nd Ed. 1891
**Schuster, —.**... ... *When may Syphilitics Marry?* (Ed. and Tr. by C. Renner) ... ... ... ... ... ... ... ... ... 1893
**Shoemaker, J. V.** ... *Materia Medica and Therapeutics.* 2 vols. ... ... 1893
**Sieveking, C. H. Jones and E. H.** *Pathological Anatomy* ... ... ... (3) 1854
**Sigmond, —.** ... ... *On the Teeth and Gums.* Part I. .. ... ... (3) 1825
**Spurzheim, J. G.** ... *Physiognomical System* ... ... ... ... (3) 2nd Ed. 1815

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|---|---|---|---|
| **Squire, B.** | *On Rhinophyma* | (3) | 1889 |
| ,, | *Superfluous Hair* | | 1893 |
| **Swayne, J. G.** | *Obstetric Aphorisms.* | 10th Ed. | 1893 |
| **Symonds, J. A.** | *Waste* | (5) | 1863 |
| **Tait, L.** | *Diseases of the Ovaries* | (3) | 1874 |
| **Tanner, T. H.** | *Signs and Diseases of Pregnancy* | (3) | 1860 |
| **Thomson, A. T.** | *The London Dispensatory* | (3) 2nd Ed. | 1818 |
| **Titley, J. M.** | *Diseases of the Genitals of the Male* | (3) | 1829 |
| **Walker, R.** | *Memoirs of Medicine* | (3) | 1799 |
| **Whitlock, R.** | *Zootomia* | (3) | 1654 |
| **Wilson, E.** | *Diseases of the Skin* | (3) 2nd Ed. | 1847 |
| **Ziemssen, O.** | *Constitutional Syphilis* | | 1893 |

## TRANSACTIONS, REPORTS, JOURNALS, &c.

*The List of current Periodicals to be seen in the Library is given in the March number.*

| | | |
|---|---|---|
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## The Hodgkins Fund Prizes.

The Smithsonian Institute has issued a circular in reference to these prizes, which are offered for essays on "the nature and properties of atmospheric air in connection with the welfare of man." The prizes are of the value of $10,000, $2,000, and $1,000. Any enquiries concerning the competition should be addressed to S. P. Langley Secretary of the Smithsonian Institute, Washington, D.C., U.S.A.

# The Bristol Eye Hospital.

This Institution, which was founded in the early part of the century, has in the past few years undergone very considerable enlargement, and by the recent addition of a new wing has been made a very complete and convenient Hospital for the study and treatment of diseases of the eye.

The frontage in Lower Maudlin Street indicates that the building consisted of two adjoining houses: one of these constituted the Hospital from 1810 until 1886, when the second house was added; more recently the two have been modified and enlarged by throwing out bows towards the gardens at the back, as shown in the illustration, for which we are indebted to the courtesy of the Editor of the *Western Daily Press*.

The ground floor is occupied by the out-patients' department, which consists of a large entrance hall, a waiting-room convenient for two hundred people, a dispensary, and the consulting and ophthalmoscope rooms of the Surgeon and Assistant-Surgeons. The first floor, reached by a fine old carved staircase, comprises the board-room and museum, the operating-room, apartments for the Matron and for the Resident House Surgeon, and two sitting-rooms—one for the male and one for the female patients. Above are three large wards, each extending the whole depth of the Hospital, and looking out back and front respectively upon the hospital garden and that of the Royal Infirmary. The wards contain twenty-six beds; in close proximity are bath-rooms for the patients and a nurses' room.

The Hospital has two staircases: one side of the building is occupied by the wards and sitting-room of the male patients; the other part is used entirely by the women and children.

All the closets have been placed in stacks built out from the general structure, and the drainage is thoroughly isolated.

More than 38,000 patients have been under treatment during the past ten years. The average of 4,000 a year has been lately exceeded, and there have been from 16,000 to 17,000 separate visits.

# SCRAPS

PICKED UP BY THE ASSISTANT-EDITOR.

**A Seasonable Hint.**—*The China Medical Missionary Journal* quotes the following from the *N.-C. Daily News:*

"The little boy doth grapple
With the early summer apple,
And the little boy prevaileth for an hour.
Then the early summer apple
With the little boy doth grapple,
And he fadeth, oh! he fadeth, like a flower."

**Clinical Records** (3).—Patient: "I have had a bottle of port wine sent me. I am not used to it. Do you think I ought to take some?" Doctor: "I don't think port wine is very good for a gouty subject. I don't think you must have any." Patient: "But I never do take any." Doctor: "Very well, then; don't take any." Patient: "But I never have taken any. I am not accustomed to it, and I don't wish for it." Doctor: "Then we are both agreed, so we won't discuss the point any more." Patient: "But why should you tell me not to take any when you know that I never have taken port wine, and that it does not agree with me?" Doctor changes the subject.

**The Effect of Environment.**— Henrik Dahl, of Aalesund, was a reader and follower of Darwin. Wishing to apply his theory of the limit of adaptability of a species to its environment, he procured a herring from a neighbouring fjord, and carried it home in a tub of sea-water. He renewed the water daily for some time, and gradually reduced the quantity, with so little inconvenience to the herring that he concluded that the fish might, in time, learn to breathe air undiluted with water, like the cat and the man. It turned out as he expected; and the water was finally turned out of the tub never to be replaced. Henrik next removed the fish from its tub, and placed it on the ground, where it flopped about very awkwardly at first, but soon learned to move freely and rapidly. In a little while the herring was able to follow its master without difficulty, and then it became his constant companion about the streets of the city. On a certain unfortunate day Henrik had occasion to cross a dilapidated bridge which spanned an arm of the harbour. The herring, coming gracefully along, heedless of danger, now and again springing at the ephemeræ, for which it had acquired an especial fondness, missed its footing, slipped through a crack into the water beneath, and was drowned.

**The Surgeon.**—Thomas Vicary, "Seriaunt Chirurgion to king Henry the eyght, to king Edward the .vj., to Queene Mary, and to our most gracious Soueraigne Lady Queene Elizabeth, and also cheefe Chirurgion of S. Bartholomewes Hospital," in his well-known book, *A profitable Treatise of the Anatomie of mans body*, notes "foure thinges moste specially that euery Chirurgion ought for to haue: The first, that he be learned; the seconde, that he be expert; the thirde, that he be ingenious; the fourth, that he be wel manered." He deals with these points in detail, and adds that surgeons must "neuer prayse themselues, for that redoundeth more to their shame and discredite, then to their fame and worship; For a cunning and skilful Chirurgion neede neuer vaunt of his dooings, for his works wyll euer get credite ynough. Likewise, that they despise no other Chirurgion without a great cause; for it is meete that one Chirurgion should loue another, as Christe loueth vs all. And in thus dooing, they shall increase both in vertue & cunning, to the honour of God and worldly fame."

The surgical ideal has been somewhat altered since Vicary's time.

In "The Ordre of the Hospital of .S. Bartholomewes in Westsmythfielde in London," 1552, it is laid down as an instruction to the surgeons that when they "go to the dressyng of any diseased persone in this house" they "shall geue vnto hym or her, faithfull and good counsaill, willing theim to mynde to sinne no more, and to be thankefull vnto almighty GOD."

With many other things, the "Order" contained the form of "A thankes-geuyng vnto Almyghtie God to be said by the poore that are cured in the hospital, at ye time of their deliuery from thence, vpon their knies in the hall before the Hospiteler, and twoo masters of this house, at the least. And this the Hospiteler shal charge them to learne without the booke, before they be deliuered."

**Medical Philology** (VI).—Following on the notes on "Bledynge boyste" given in March, some further allusions to the practice of bleeding will be of interest.

From a work described as *Mirivalensis in campo florum*, but of which no copy has been found, there came into the *Promptorium* the definition "Bledynge yryn. *Fleosotomium*," or, as it appears in Pynson's printed edition of 1499, *fleobothomium*. In the *Catholicon* the word appears as "Bluderyne" and "Blodeyren," with the Latin equivalents, *fleubotomum*, *lanciola*. Mr. Herrtage's notes are:

> '*Phlebotomon.* The instrument to let bloud; a fleume.' Cooper. '*Fleubotomo; sanguinem minuere. Fleubotomium: instrumentum cum quo sanguis minuitur.*' Medulla.[1]

> In the Invent. of John Stubbes, of York, barber, taken in 1451, we find the following entry: '*De blode yrens* et launcettes in j case, ij$^{s.}$' *Test. Ebor.* iii. 118.

The *New English Dictionary* gives "lancet" as a definition of "blood iron," a term which, from the entry in Stubbes's Inventory, it would seem not improbable was at one time reserved for the instrument used for scarification with the cupping-glass. In Ambrose Paré's time, as may be seen from an illustration in his book, it was a narrow straight instrument, with one end bent to form a small handle, and a protruding cutting edge at the other. While the form of the cutting instrument used in cupping has greatly changed since Paré's day, the lancet, of which he also gives a drawing, was practically the same shape as at present.

The speciality in which these instruments were used was subdivided into the drawing of blood by venesection and the practice of cupping. In an English Vocabulary of the fifteenth century, printed by Wright (*Anglo-Saxon and Old English Vocabularies*, 2nd ed., 1884, I. 652), "*Hic fleobotomator, A*$^{e}$ blodelater" and "*Hic scarificator, A*$^{e}$ carsare" are given under "Nomina Artificiorum." Wright had not met with the word "carsare" before, and he offers no explanation of it. It is not given in the *New English Dictionary*. The word may by some transposition of letters, or by miswriting, be connected with *scaro*, which in the March *Journal* I quoted from the *Promptorium*, where, with *ventoso*, it is given as one of the Latin equivalents of "boyston."

*Ventose* became the technical name in English for the cupping-glass, and is used in the 1632 translation of Paré. Chaucer, in describing the nature of Arcite's fatal injuries, says (*Knightes Tale*, ll. 1887–90):

> "The clothered blood, for any lechecraft,
> Corrupteth, and is in his bouk y-laft,
> That nother veyne-blood, ne ventusinge,
> Ne drinke of herbes may ben his helpinge."

In modern French, *Ventouse* is the word for cupping-glass.

In earlier times the vessel used was made of brass or horn. Celsus (II. xi) says: "Cucurbitularum vero duo genera sunt: aëneum, et corneum. Aënea, altera parte patet; altera, clausa est: cornea, altera parte æque patens, altera foramen habet exigium. In aëneam linamentum ardens conjicitur, ac sic os ejus corpori aptatur, imprimiturque, donec inhæreat. Cornea per se corpori imponitur; deinde, ubi ea parte, qua exiguum foramen est, ore spiritus adductus est, superque cera cavum id clausum est, æque inhærescit." Paré refers to the horn, and describes in detail the same mode of using it.

1 This is the *Medulla Grammatice*, the earliest known Latin-English Dictionary, and supposed to have been compiled by the writer of the *Promptorium*. There are several versions of it among the Harleian MSS. in the British Museum. There are also, besides those in some private libraries, copies in the Cathedral libraries of Canterbury and Lincoln, and in the library of King Edward's Grammar School at Shrewsbury. All of them were written in the latter half of the fifteenth century.